## COMMITMENT & INTEGRITY DRIVE RESULTS

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September 25, 2009

Ms. Kimberly Tisa, PCB Coordinator U.S. Environmental Protection Agency Region 1 1 Congress Street, Suite 1100 Boston, Massachusetts 02114-2023

Re:

Completion Report

Yale University - Mason Building Room 112

New Haven, CT

Dear Ms. Tisa:

On behalf of Yale University, please find attached a report providing a description of the PCB remediation activities performed within Room 112 of the Mason Building on the Yale University campus in New Haven, Connecticut. This report is being submitted to the meet the requirements pursuant to Recordkeeping and Reporting Condition 19 as it is described in EPA's May 11, 2009 Approval, granted under 40 CFR Part 761.61(a).

The PCB remediation activities commenced on May 29, 2009 and were completed on August 31, 2009.

If you have any comments, questions, or require further information, please do not hesitate to e-mail or call me at the number listed above.

Sincerely,

WOODARD & CURRAN INC.

Jeffrey Hamel, LSP, LEP Senior Vice President

cc:

Brenda Armstrong, Yale University

G. Trombly, CTDEP



# COMPLETION REPORT

Yale University Room 112 Mason Building

1.866.702.6371 35 New England Business Center Andover, MA #210954.00 Yale University New Haven, CT September 2009



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#### **EXECUTIVE SUMMARY**

This report provides a description of the polychlorinated biphenyl (PCB) remediation activities performed within Room 112 of the Mason Building located on Yale University's New Haven, Connecticut campus. Removal of PCB impacted concrete and soil was performed during the remediation activities.

Room 112 of the Mason Building was historically used as a laboratory and housed three diffusion pump systems. As part of ongoing renovations to the Mason Building, the decommissioning and removal of the diffusion pump systems was conducted. Results from samples of oil drained from the diffusion pump systems indicated that the oil contained PCBs at concentrations up to 15,000 ppm. Following system removal, concrete samples were collected from the basement area floor as part of a release assessment in February 2009. Analytical results indicated that PCBs were present at concentrations up to 35.4 mg/kg.

This report provides a description of the PCB remediation activities as they were performed in accordance with the Self-Implementing On-Site Cleanup and Disposal Plan (SIP) submitted to the U.S. Environmental Protection Agency (EPA) on May 1, 2009 (as modified due to structural concerns in an email dated May 29, 2009) and the EPA's Approval for Cleanup and Disposal of PCB Remediation Waste under 40 CFR 761.61(a) dated May 11, 2009.

The PCB remediation activities commenced on May 29, 2009 and were completed on August 31, 2009. Remediation activities were performed by the Mack Group, LLC of Cherry Hill, New Jersey. Sampling activities were performed by Woodard & Curran, Inc. of Andover, Massachusetts. Laboratory analyses of concrete and soil samples were performed by Analytics Laboratory of Portsmouth, New Hampshire.

The PCB remediation activities completed included:

- Removal of impacted concrete to a clean up standard of ≤ 1 ppm total PCBs (approximately 10 cubic yards of concrete removed);
- Removal of impacted soils underlying the concrete slab to a clean up standard of clean up standard of ≤ 1
  ppm total PCBs (approximately 2 cubic yards of soil removed); and
- Collection of verification concrete and soil samples for analyses.

The results of the remediation and verification activities indicated that all activities were completed consistent with the SIP and EPA's Approval and that the high-occupancy clean up level has been achieved for all remaining materials within Room 112 of the Mason Building. As such, no further remediation activities are warranted.



#### 1. INTRODUCTION

Room 112 of the Mason Building, at 9 Hillhouse Avenue on Yale University's New Haven, Connecticut Campus (Figure 1-1), was historically used as a laboratory and housed three diffusion pump systems. Each system consisted of a diffusion pump, a booster pump with a reservoir of oil, and a micro-vac pump system to draw a vacuum on the diffusion pump system. According to Yale personnel, the diffusion pump systems have been out of use for more than 20 years.

Room 112 consists of a first level floor and a basement area accessible through a stairwell in the southwest corner of the room. The first floor level is approximately 33 feet by 26 feet with tile flooring throughout. The basement area is approximately 23.5 feet by 20 feet with a concrete floor. Utility trenches throughout the basement connect condensate blowdown lines from the diffusion pump systems to the building drainage system.

As part of ongoing renovations to the Mason Building, the decommissioning and removal of the diffusion pump systems was conducted (details on the removal and off-site disposal of these systems was provided in the May 1, 2009 SIP Notification submittal). Results from samples of oil drained from the diffusion pump systems prior to removal indicated that the oil contained PCBs at concentrations up to 15,000 ppm. Following system removal, a release assessment was conducted in February 2009. Results of the release assessment concluded that no additional activities were required on the first floor. Following a cleaning of the concrete floor, characterization sampling of the basement floor was conducted following 40 CFR 761.280 procedures utilizing a 1.5 meter sampling grid.

As described in the May 2009 SIP, characterization samples included:

- 25 bulk concrete samples from the floor at a depth of 0-0.5 inches (24 of the 25 samples collected contained PCBs at concentrations > 1 ppm); and
- 3 bulk concrete samples from the floor at a depth of 0.5-1 inches (2 of the 3 samples collected contained PCBs at concentrations > 1 ppm).

Based on these results, a SIP Notification was submitted and subsequently approved by the EPA, and remediation activities were performed.

This completion report provides a description of the project activities and is being submitted to the meet the requirements pursuant to Recordkeeping and Reporting Condition 19 as it is described in EPA's May 11, 2009 Approval, granted under 40 CFR Part 761.61(a) (see Appendix A). The required notifications and certifications per the Approval were submitted to EPA on May 21, 2009.



#### 2. REMEDIATION AND VERIFICATION METHODS

The PCB remediation activities commenced on May 29, 2009 and were completed on August 31, 2009. An overview of the remediation and verification sampling methods is presented in the following sections. Photographs of the activities are presented in Appendix B.

#### 2.1 REMEDIATION OVERVIEW

The clean-up activities were conducted consistent with the SIP and EPA's Approval of the plan under 40 CFR 761.61(a). The overall approach to removal was modified following consultation with a structural engineering firm, Spiegel Zamecnik & Shah Inc., of New Haven, Connecticut. It was determined that portions of the concrete slab extending approximately 4.5 feet inward from the east and west walls of the room contained underlying footings to load-bearing walls. Based on these discussions, and in order to protect the structural integrity of the Mason Building, complete removal of the concrete slab was eliminated as a feasible option. As such, the clean up plan was modified (as documented in a modification request submitted to EPA on May 29, 2009) to require the removal of materials containing total PCB concentrations greater than 1 ppm as opposed to complete slab removal.

Due to the structural concerns raised and based on characterization data that indicated PCB impacts above 1 ppm were present in concrete to depths of at least 0.5-1.0 inches, the initial remediation of the concrete floor consisted of the removal of four inches of concrete across the entire basement area. Following the initial removal, additional removal of concrete and soil was conducted based on the results of verification sampling. Concrete removal was conducted using a jack hammer and hand tools. Impacted soils were removed with hand tools.

The remediation activities included the following:

- Removal of concrete above the clean up level of ≤ 1 ppm total PCBs;
- Complete removal of all three microvac pump concrete bases:
- Removal of soil above the clean up level of ≤ 1 ppm total PCBs;
- Collection of verification samples for analyses following removal; and
- Restoration of the basement area.

#### 2.2 SITE PREPARATION AND CONTROLS

Prior to initiating the remediation activities, the following site controls were implemented:

- A Health & Safety Plan was developed specific to the work activities. All activities conducted followed applicable Federal and State regulations, including but not limited to OSHA regulations, respiratory protection, personal protective equipment (PPE), etc.;
- Access to the basement area was limited to using the basement level door. Access via the stairwell was
  prevented through securing the stairway with polyethylene sheeting;
- Walls and ceilings of the basement area were covered with polyethylene sheeting to prevent spread of impacted concrete dust to these surfaces and the entire work zone was placed under negative air pressure with a HEPA filtered exhaust fan to the outdoors;
- Areas previously decontaminated were subsequently covered with polyethylene sheeting to prevent potential re-contamination; and
- The basement level access route was covered in polyethylene sheeting to prevent the spread of impacted concrete dust out of the basement area.



#### 2.3 SAMPLE COLLECTION AND ANALYSIS PROCEDURES

Verification samples were collected in accordance with Subpart O requirements. Concrete sampling was conducted in accordance with the USEPA Region I *Draft Standard Operating Procedure for Sampling Concrete in the Field* (December 1997). At each location concrete samples were collected from 0 to 0.5 inches below the remaining concrete surfaces. Verification soil samples were collected from 0-3 inches below the surface of the remaining soils using a hand trowel. Sampling equipment was decontaminated prior to and between each sampling location with a non-phosphate washing detergent/water solution followed by a water rinse.

All samples were logged in the project field book and on a standard Chain-of-Custody (COC), and stored on ice for delivery to the laboratory. Samples were submitted to Analytics Environmental Laboratory in Portsmouth, New Hampshire, extracted using USEPA Method 3540C (Soxhlet Extraction) and analyzed for PCBs using USEPA Method 8082. Complete copies of the analytical laboratory reports are included in Appendix C.

#### 2.4 INITIAL REMOVAL – CONCRETE

The upper four inches of concrete (approximately 6.3 cubic yards (yds³)) were removed across the entire basement area beginning on May 29, 2009. Following concrete removal, verification samples were collected following Subpart O sampling procedures on a five foot grid. During verification sampling it was noted that the concrete within the microvac pump bases appeared to be less competent and more porous than other portions of the concrete slab. The sample locations and grid layout are presented on Figure 2-1. It is noted that samples collected from the grid points at the edges of the room were off set so as to not collect all samples along this line from locations within the former utility trenches.

Analytical results from the verification sampling indicated that the concentrations of PCBs exceeded 1.0 mg/kg in six of the samples. All six of the concrete samples with concentrations greater than 1 mg/kg were collected in the vicinity of the microvac pump bases. A summary of the analytical results is presented on Table 2-1. Based on these results additional concrete removal was required from three areas (identified as Areas A, B, and C on Figure 2-1) in the vicinity of the microvac pump bases.

#### 2.5 SECOND ROUND OF REMOVAL – CONCRETE

Following receipt of the initial verification sample results, additional removal of approximately 1.1 yds³ of impacted concrete was conducted on June 8 and 9, 2009. Prior to removal, a structural engineer was consulted to determine whether or not the required removal would potentially raise structural concerns. Based on the observed total PCB concentrations in the initial verification results, an additional two inches of concrete were removed from Areas A and B and an additional four inches were removed from Area C. The additional four inches of removal from within Area C resulted in portions of the slab being completely removed exposing the underlying sub-slab soils.

On June 10, 2009, seven verification concrete samples were collected as described in Section 2.3 above. The sample locations are presented on Figure 2-2. Analytical results are presented in Table 2-1 and summarized below:

Area A: Two of the three samples collected contained PCBs at concentrations below 1 mg/kg (CC01A and CC03A at <0.033 and 0.119 mg/kg, respectively). The third sample, CC02A, collected from within the limits of microvac pump base #2 contained a total PCB concentration of 160 mg/kg.

Area B: One of the two samples collected contained PCBs at a concentration below 1 mg/kg (CC01B at 0.112 mg/kg). The second sample, CC02B, collected from within microvac pump base #3, contained a total PCB concentration of 7.26 mg/kg.

Area C: Analytical results from the two concrete samples indicated that total PCB concentrations were >1 mg/kg (5.41 and 72.1 mg/kg). Both of the verification samples from within Area C were collected from the microvac pump base #1.



Based on these results additional concrete removal was determined to be required. Prior to determining the extent of the concrete removal, additional samples were collected in Areas B and C on June 19, 2009. One concrete sample from both Area B and Area C was collected from concrete outside the limits of the associated microvac pump bases. This was done to determine if the observed PCB impacts were limited to the pump bases as indicated by the existing data. In addition, one sample was collected from exposed soil within Area C to determine if PCB impacts were present in sub-slab soils. The locations of the samples are depicted on Figure 2-2 and the results summarized on Table 2-1 and Table 2-2 (soil).

Analytical results from the additional sampling indicated that the concentrations of PCBs in concrete adjacent to the microvac pump bases in Areas B and C were 0.135 and 0.024 mg/kg. Analytical results from the soil sample collected from the sub-slab soils in Area C indicated that PCBs were present at a concentration of 2.66 mg/kg.

#### 2.6 THIRD ROUND OF REMOVAL – CONCRETE AND SOIL

The extent of additional removal to achieve the clean up goal of ≤1 mg/kg was evaluated for both concrete and soil media and discussed with the structural engineer to determine potential impacts to the structural integrity of the building. It was determined that complete removal of all three microvac pump bases would not impact the building structure. Limited soil removal from Area C was also determined to be feasible provided that it proceeded in a sloped manner away from the bottom of the southern building footing.

Removal of the three microvac pump bases and soil from within Area C was completed on July 14, 2009. Each of the three microvac pump bases were completely removed for a total of approximately 2.7 yds³ of concrete. Within Area C, soils directly underneath the former microvac pump base were removed to a maximum depth of nine inches below the former pump base. Outside the microvac pump base, one foot of soil was removed. Approximately 1.6 yds³ of soil were removed from Area C. Soil removal was not conducted in Areas A or B.

Verification soil samples were collected from remaining soils in each of the three areas on July 15, 2009. Verification soil samples were collected in accordance with Subpart O sampling procedures as described above. The locations of the soil samples collected are presented on Figure 2-3 and the results summarized on Table 2-2.

Analytical results indicate that the concentrations of total PCBs were below the clean up level of ≤1 ppm in four of the five samples. The concentration of total PCBs in soil sample SS002, one of the two soil samples collected from Area A, was 36.8 mg/kg.

Based on these results, additional soil removal from Area A was required to meet the clean up goal of ≤ 1 ppm.

#### 2.7 FINAL ROUND OF REMOVAL – SOIL

Based on the analytical results, an additional six inches of soil were removed from beneath the former microvac pump base #2 (Area A) as depicted on Figure 2-4. Approximately 0.33 yds<sup>3</sup> of soil were removed on July 27, 2009. On July 30, 2009, one verification soil sample was collected from within the removal area at a location offset from the previous soil sample location.

Analytical results indicate that the concentration of total PCBs in the sample was 0.555 mg/kg. Verification soil sample results are summarized on Table 2-2 and presented on Figure 2-4.

Based on these results, no additional removal of materials was required to meet the clean up goal of  $\leq 1$  ppm.

#### 2.8 DATA USABILITY ASSESSMENT

Analytical data generated during remediation activities were validated by Data Check, Inc. of New Durham, New Hampshire according to a modified Tier II validation procedure. Results of the data validation indicated that all data were useable for the intended purposes.

A summary of the data validation is provided in Appendix D. A summary of the data usability assessment is provided below.



In addition to the primary samples, two duplicate samples and two field equipment blanks were collected and submitted to the laboratory as part of the QA/QC procedures associated with the sample collection. The results of the duplicate samples in comparison to their associated primary samples indicated that the relative percent differences (RPD) were within the limits allowed by data acceptance criteria for one of the two duplicate samples. Results of the second duplicate sample, as compared to the associated primary sample, were outside the limits of the data acceptance criteria. Results from the individual sample column results were also used to calculate RPDs. Results of this assessment indicated that the RPD between sample column results for one primary sample exceeded the acceptance criteria. Total PCB concentrations for the two samples were qualified "J" due to exceeding the relative percent difference (RPD) requirements between either the primary and field duplicate sample results or the individual sample column results.

No analytes were detected in the two aqueous field equipment blank samples, indicating that no interferences were introduced during sample collection.

Consistent procedures and laboratory analysis of the data were achieved. Sample containers were packed on ice and were accompanied by complete chain of custody forms from the time of sample collection until laboratory delivery. All samples were analyzed within the allowable holding time for their respective analyses. No analytes were detected in the laboratory batch blank analysis, indicating that there were no interferences introduced at the laboratory during sample analysis. All quality control criteria for initial calibration and calibration verification were within acceptable limits.

Accuracy of the analytical data was assessed by reviewing the PCB matrix spike / matrix spike duplicate (MS/MSD) analyses performed by the laboratory on select samples. All MS/MSD analyses met acceptance criteria for relative percent difference with two exceptions. However, no qualifications were applied to the data based on the dilution factors associated with the specific samples.

The data packages were reviewed to ensure that all sample and associated quality assurance results were available. The completeness review indicated that all collected samples were analyzed and all quality control results were available to complete the data validation process. No data was rejected based on data validation.

The results of this data usability assessment indicate that the data is of sufficient quality for use in rendering and opinion on site conditions.

#### 2.9 WASTE STORAGE AND DISPOSAL

Material generated during remediation activities were managed in accordance with the Approval under 40 CFR 761. Following removal, concrete and soil were transported to lined, covered, and marked roll-offs staged outside the building. Polyethylene sheeting was placed on the floor along the route from the remediation area to the roll-offs. Materials were transported in wheeled carts along the transport route and transferred into the roll-offs. Approximately 12 yards of concrete and soil generated were transported off-site on two separate events, June 18, 2009 and August 3, 2009. This material was sampled in accordance with 40 CFR 761.61 Subpart O requirements prior to removal and disposed of as >50 ppm PCBs.

Concrete and soil were transported off-site under manifest for disposal at the Chemical Waste Management facility located in Model City, New York. Polyethylene sheeting, containment materials, and PPE were sampled and transported off-site under manifest to Pollution Control Industries of East Chicago, Indiana with subsequent disposal to the River Bend Prairie Landfill in Dolton, Illinois. Copies of the waste manifests and certificates of disposal are provided in Appendix E.

#### 2.10 SITE RESTORATION

In accordance with Section 3.4 of the plan, a new concrete floor was poured in the basement area of Room 112. This activity was completed on August 31, 2009.

## Table 2-1 Summary of Concrete Verification Sample Results

#### Yale Mason Building Room 112 New Haven, Connecticut

Sample ID	Date	Sample Depth <sup>1</sup>	Total PCBs (mg/kg)		
Initial Verification Samples					
YMB-CS-CC01	6/1/09	0-0.5	4.43 <sup>2</sup>		
YMB-CS-CC02	6/1/09	0-0.5	15.2 <sup>2</sup>		
YMB-CS-CC03	6/1/09	0-0.5	0.058		
YMB-CS-CC04	6/1/09	0-0.5	0.068		
YMB-CS-CC05	6/1/09	0-0.5	0.031 J		
YMB-CS-CC06	6/1/09	0-0.5	0.318		
YMB-CS-CC07	6/1/09	4-4.5	1.34 <sup>2</sup>		
YMB-CS-CC08	6/1/09	4-4.5	0.035 J		
YMB-CS-CC09	6/1/09	4-4.5	0.274		
YMB-CS-CC10	6/1/09	4-4.5	0.311		
YMB-CS-CC11	6/1/09	4-4.5	0.386		
YMB-CS-CC12	6/1/09	4-4.5	0.025 J		
YMB-CS-CC13	6/1/09	4-4.5	0.047		
YMB-CS-CC14	6/1/09	4-4.5	0.020 J		
YMB-CS-CC15	6/1/09	4-4.5	0.049		
YMB-CS-CC16	6/1/09	4-4.5	0.090		
YMB-CS-CC17	6/1/09	4-4.5	0.045		
YMB-CS-CC18	6/1/09	4-4.5	2.18 2		
YMB-CS-CC19	6/1/09	4-4.5	1.28 <sup>2</sup> J		
YMB-CS-CC20	6/1/09	4-4.5	0.163		
YMB-CS-CC21	6/1/09	4-4.5	0.062		
YMB-CS-CC22	6/1/09	4-4.5	0.208		
YMB-CS-CC23	6/1/09	4-4.5	1.56 <sup>2</sup>		
YMB-CS-CC24	6/1/09	4-4.5	0.209		
YMB-CS-CC25	6/1/09	4-4.5	0.115		
Second Round Verification Samples					
YMB-CS-CC01A	6/10/2009	6-6.5	<0.033		
YMB-CS-CC02A	6/10/2009	6-6.5	160 <sup>2</sup>		
YMB-CS-CC03A	6/10/2009	6-6.5	0.119		
YMB-CS-CC01B	6/10/2009	6-6.5	0.112		
YMB-CS-CC02B	6/10/2009	6-6.5	7.26 <sup>2</sup>		
YMB-CS-CC01C	6/10/2009	8-8.5	72.1 <sup>2</sup> J		
YMB-CS-CC02C	6/10/09	8-8.5	5.41 <sup>2</sup>		
YMB-VS-CC026	6/19/09	8-8.5	0.135		
YMB-VS-CC027	6/19/09	6-6.5	0.024 J		

#### Notes:

- 1. Sample depth in inches below top of original slab.
- 2. Impacted concrete removed as part of additional removal actions. Concrete represented by the sample is no longer present at the site.
- J: Estimated concentrations

Results in bold and shaded indicate concentrations >1 mg/kg.

All samples extracted by Soxhlet Method 3540C and analyzed for PCBs by USEPA Method 8082.

All PCB detections were reported as Aroclor 1254; no other Aroclors were reported.

## Table 2-2 Summary of Soil Verification Sample Results

#### Yale Mason Building Room 112 New Haven, Connecticut

Removal Area	Verification Sample ID	Date	Sample Depth <sup>1</sup>	Total PCBs (mg/kg)
	YMB-VS-SS002	7/15/09	0-3	36.8 <sup>2</sup>
Α	YMB-VS-SS006	7/15/09	0-3	0.040
	YMB-VS-CC101	7/30/09	6-9	0.555
В	YMB-VS-SS005	7/15/09	0-3	0.704
	YMB-VS-SS001	6/19/09	0-3	2.66 <sup>2</sup>
С	YMB-VS-SS003	7/15/09	0-3	0.067
	YMB-VS-SS004	7/15/09	0-3	< 0.033

#### Notes:

- 1. Sample depth in inches below bottom of slab.
- 2. Impacted soil removed as part of additional removal actions. Soil represented by the sample is no longer present at the site.
  Results in bold and shaded indicate concentrations >1 mg/kg.
  All samples extracted by Soxhlet Method 3540C and analyzed for PCBs by USEPA Method 8082.

All PCB detections were reported as Aroclor 1254; no other Aroclors were reported.



#### 3. SUMMARY AND CONCLUSIONS

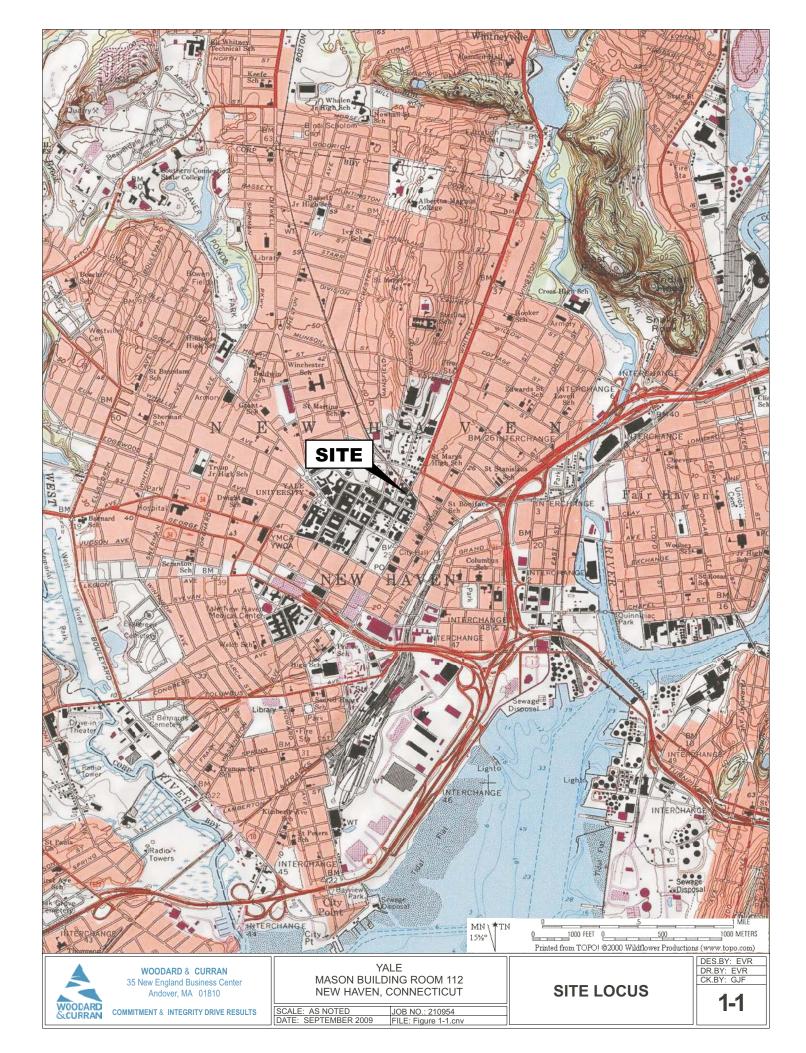
PCB remediation activities were performed in the basement area of Room 112 at the Mason Building on the Yale University campus in New Haven, Connecticut. Removal and decontamination of PCB affected media was conducted in the basement area from May 29, 2009 through August 31, 2009. These activities were completed in accordance with the May 1, 2009 SIP and the EPA's Approval for Cleanup and Disposal of PCB Remediation Waste under 40 CFR 761.61(a) dated May 11, 2009.

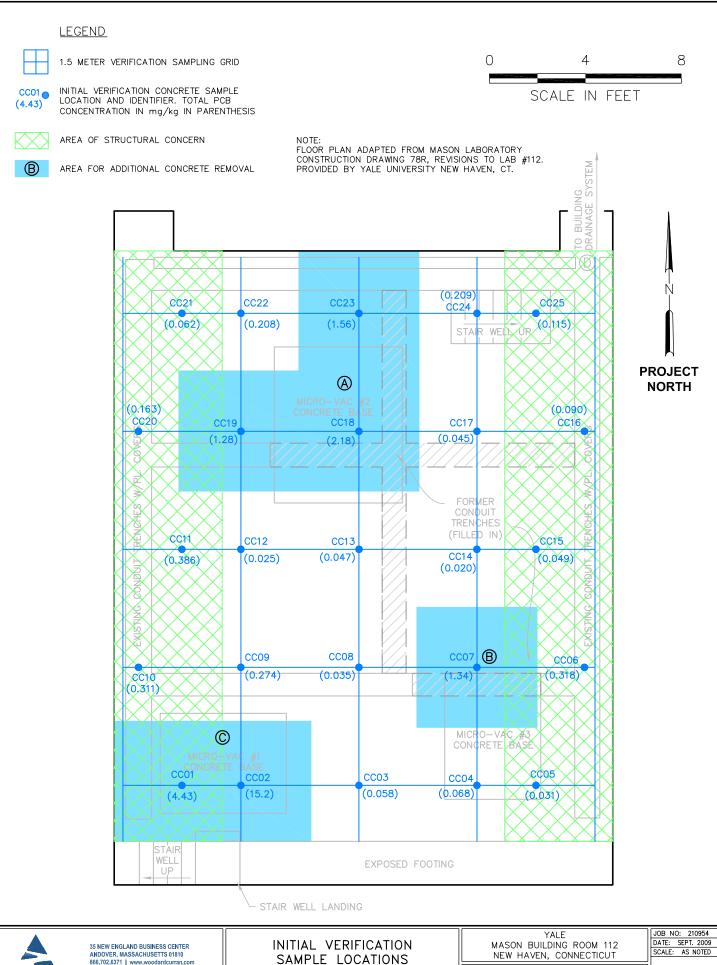
Remediation activities were performed by the Mack Group, L.L.C., with engineering oversight and verification sampling conducted by Woodard & Curran. A total of 20.2 tons of PCB-contaminated concrete and soil were removed and shipped off-site for disposal at the Chemical Waste Management facility located in Model City, New York. A total of two 55-gallon drums of polyethylene sheeting, containment materials, and PPE were shipped to Pollution Control Industries of East Chicago, Indiana with final disposal at the River Bend Prairie Landfill in Dolton, Illinois.

Verification sampling was conducted following the remediation activities. Results indicate that all remaining materials (concrete and soil) meet the clean up goal of  $\leq$  1 ppm total PCBs.

Final room restoration was completed on August 31, 2009 with the pouring of a new floor over the entire basement area.

Based on the results of the remedial and verification activities, no additional remediation is warranted.





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CHECKED BY: JAH

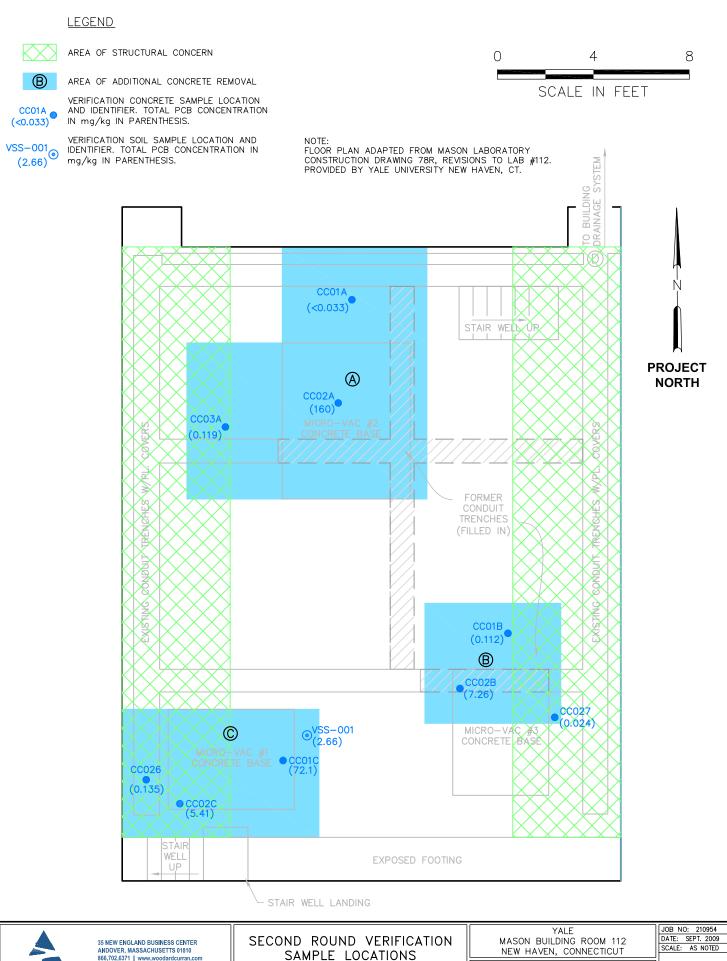
Figure 2-1.dwg

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FIGURE 2-1





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CHECKED BY: JAH

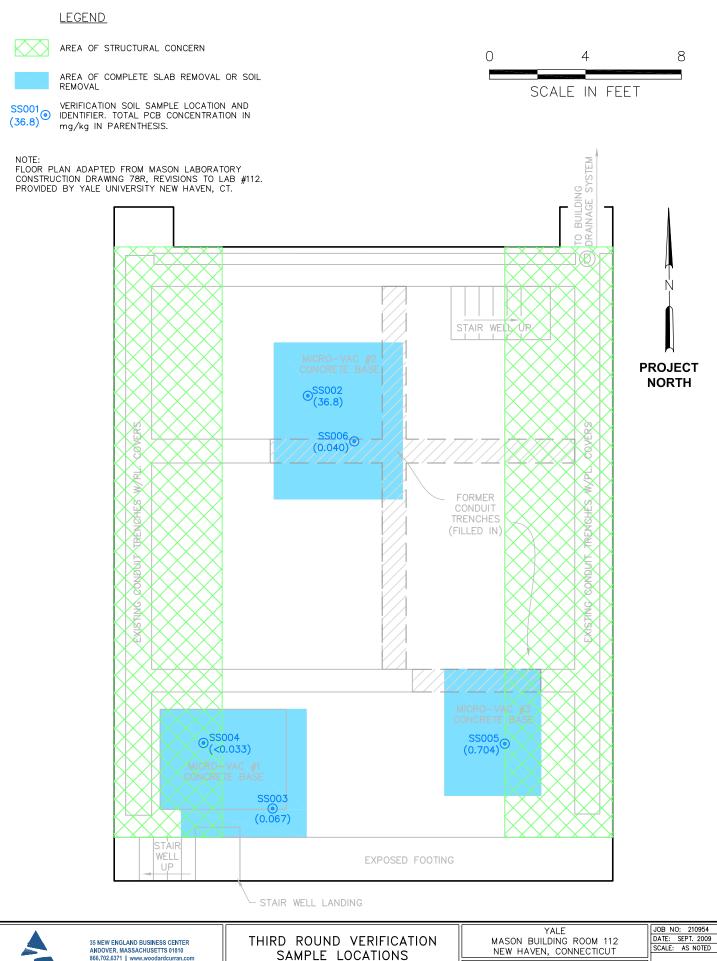
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FIGURE 2-2

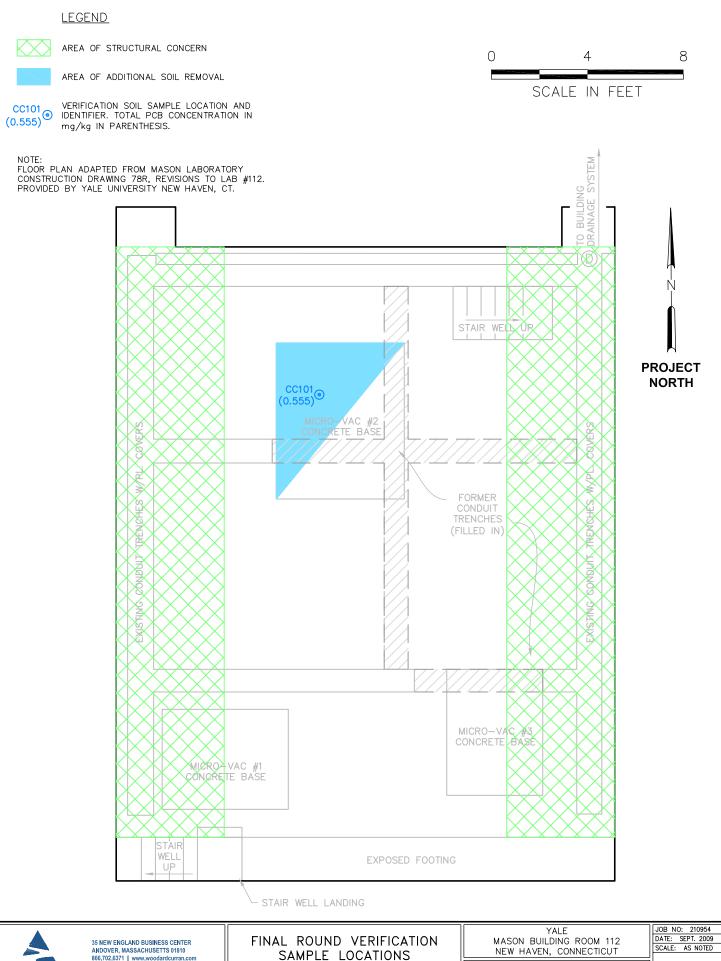




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FIGURE 2-3 COMPLETION REPORT





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FINAL	ROUND	VERIFICATION
SA	MPLE L	LOCATIONS

DESIGNED BY: GJF CHECKED BY: JAH DRAWN BY: EVR Figure 2-4.dwg

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FIGURE 2-4



### APPENDIX A: USEPA APPROVAL LETTER



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION I

1 CONGRESS STREET, SUITE 1100, BOSTON, MASSACHUSETTS 02114-2023

#### **CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

MAY 1 1 2009

Mr. John H. Bollier Associate Vice President for Facilities Yale University Office of Environmental Health & Safety 135 College Street New Haven, Connecticut 06510

Re: Approval for Cleanup and Disposal of *PCB Remediation Waste* under 40 CFR

§ 761.61(a)

Dear Mr. Bollier:

This is in response to your Notification<sup>1</sup> of a proposed plan to address PCB-contaminated materials located in Room 112 of the Mason Building located on the Yale University (Yale) campus. Specifically, PCB-contaminated concrete that exceeds the allowable PCB levels for unrestricted use under 40 CFR § 761.61(a) is present in the Room 112 basement (the Site). Yale has requested an approval to cleanup and dispose of the PCB-contaminated concrete (and potentially PCB-contaminated sub-slab soils) under 40 CFR § 761.61(a).

The proposed cleanup and disposal of the PCB-contaminated materials (i.e. concrete and potentially sub-slab soils) from the Site meet the self-implementing notification requirements under 40 CFR § 761.61(a)(3). As such, EPA may approve Yale's Notification under § 761.61(a). Yale may proceed with the PCB cleanup and off-site disposal under 40 CFR § 761.61(a) and its Notification, subject to this Approval and the conditions of Attachment 1.

This Approval only addresses cleanup and disposal of the *PCB remediation waste* identified in the Notification, specifically PCB-contaminated concrete and sub-slab soils located in the Room 112 basement.

This information was submitted by Woodard & Curran on your behalf to satisfy the notification requirement under 40 CFR § 761.61(a). Information was provided dated May 1, 2009 (with attached cleanup and disposal plan dated April 2009) and May 8, 2009 (via e-mail). These submittals will be referred to as the "Notification."

Questions and correspondence regarding this Approval should be directed to:

Kimberly N. Tisa, PCB Coordinator United States Environmental Protection Agency 1 Congress Street, Suite 1100 - CPT Boston, Massachusetts 02114-2023

Telephone: (617) 918-1527 Facsimile: (617) 918-0527

EPA shall not consider this project complete until it has received all submittals required under this Approval.

Sincerely,

Mary Sanderson, Chief

Remediation & Restoration II Branch

cc: /J. Hamel, Woodard & Curran

G. Trombly, CT DEP

File

Attachment 1

## ATTACHMENT 1: PCB CLEANUP AND DISPOSAL APPROVAL CONDITIONS YALE UNIVERSITY – MASON BUILDING ROOM 112 BASEMENT NEW HAVEN, CONNECTICUT

#### **GENERAL CONDITIONS**

- 1. This Approval is granted under the authority of Section 6(e) of the Toxic Substances Control Act (TSCA), 15 U.S.C. § 2605(e), and the PCB regulations at 40 CFR Part 761, and applies solely to the *PCB remediation waste* at the Site and identified in the Notification, specifically the PCB-contaminated concrete and potentially PCB-contaminated sub-slab soils located in the Room 112 basement of the Mason Building.
- 2. Yale University (Yale) shall conduct on-site activities in accordance with the conditions of this Approval and with the Notification.
- 3. In the event that the activities described in the Notification differ from the conditions specified in this Approval, the conditions of this Approval shall govern.
- 4. The terms and abbreviations used herein shall have the meanings as defined in 40 CFR § 761.3 unless otherwise defined within this Approval.
- 5. Yale must comply with all applicable federal, state and local regulations in the storage, handling, and disposal of all PCB wastes, including PCBs, PCB Items and decontamination wastes generated under this Approval. In the event of a new spill during response actions, Yale shall contact EPA within 24 hours for direction on sampling and disposal requirements.
- 6. Yale is responsible for the actions of all officers, employees, agents, contractors, subcontractors, and others who are involved in activities conducted under this Approval. If at any time Yale has or receives information indicating that Yale or any other person has failed, or may have failed, to comply with any provision of this Approval, it must report the information to EPA in writing within 24 hours of having or receiving the information.
- 7. This Approval does not constitute a determination by EPA that the transporters or disposal facilities selected by Yale are authorized to conduct the activities set forth in the Notification. Yale is responsible for ensuring that its selected transporters and disposal facilities are authorized to conduct these activities in accordance with all applicable federal, state and local statutes and regulations.
- 8. This Approval does not: 1) waive or compromise EPA's enforcement and regulatory authority; 2) release Yale from compliance with any applicable requirements of federal, state or local law; or, 3) release Yale from liability for, or otherwise resolve, any violations of federal, state or local law.

#### **NOTIFICATION CONDITIONS**

- 9. This Approval may be revoked if the EPA does not receive written notification from Yale of its acceptance of the conditions of this Approval within 10 business days of receipt.
- 10. Yale shall notify EPA in writing of the scheduled date of commencement of on-site activities at least 3 business days prior to conducting any work under this Approval.

#### **REMEDIAL and DISPOSAL CONDITIONS**

- 11. Prior to initiating onsite work under this Approval, Yale shall submit the following information:
  - a. A certification signed by the selected analytical laboratory, stating that the laboratory has read and understands the analytical and quality assurance requirements specified in the Notification and in this Approval; and,
  - b. A certification signed by its selected remediation contractor, stating that the contractor has read and understands the Notification, and agrees to abide by the conditions specified in this Approval.
- 12. The cleanup level for *PCB remediation waste* at the Site shall be less than or equal to 1 part per million ( $\leq 1$  ppm)
  - a. *Porous surface* samples (i.e. concrete) shall be collected according to EPA's *draft* Standard Operating Procedure For Sampling Concrete in the Field, dated 12/01/97 at a maximum depth interval of 0.5 inches and in accordance with the frequency requirements at Subpart O.
  - b. Bulk *PCB remediation waste* (i.e. soil) samples shall be collected on a bulk basis (e.g. mg/Kg) and reported on a dry-weight basis. Verification sampling shall comply with Subpart O; samples shall be collected from both excavation bottoms and sidewalls, as applicable.
  - c. Chemical extraction for PCBs shall be conducted using Method 3500B/3540C of SW-846 for solid matrices, including wipes, and Method 3500B/3510C of SW-846 for aqueous matrices; and, chemical analysis for PCBs shall be conducted using Method 8082 of SW-846, unless another extraction or analytical method(s) is validated according to Subpart Q.

- All PCB waste (regardless of concentration) generated as a result of the activities described in the Notification, excluding any decontaminated materials, shall be marked in accordance with § 761.40; stored in a manner prescribed in § 761.65; and, disposed of in accordance with 40 CFR § 761.61(a)(5), unless otherwise specified below:
  - a. Non-liquid cleaning materials, such as PPE and similar materials resulting from decontamination, shall be disposed of in accordance with § 761.79(g)(6).
  - b. Moveable equipment, tools, and sampling equipment shall be decontaminated in accordance with either § 761.79(b)(3)(i)(A), § 761.79(b)(3)(ii)(A), or § 761.79(c)(2).
  - c. PCB-contaminated water generated during decontamination or dewatering shall be decontaminated in accordance with § 761.79(b)(1) or disposed of under § 761.70.

#### INSPECTION, MODIFICATION AND REVOCATION CONDITIONS

- 14. Yale shall allow any authorized representative of the Administrator of the EPA to inspect the Site and to inspect records and take samples as may be necessary to determine compliance with the PCB regulations and this Approval. Any refusal by Yale to allow such an inspection (as authorized by Section 11 of TSCA) shall be grounds for revocation of this Approval.
- 15. Any proposed modification(s) in the plan, specifications, or information in the Notification must be submitted to EPA no less than 14 calendar days prior to the proposed implementation of the change. Such proposed modifications will be subject to the procedures of 40 CFR §761.61(a)(3)(ii).
- 16. Any departure from the conditions of this Approval without prior, written authorization from the EPA may result in the revocation, suspension and/or modification of the Approval, in addition to any other legal or equitable relief or remedy the EPA may choose to pursue.
- 17. Any misrepresentation or omission of any material fact in the Notification or in any records or reports may result in the EPA's revocation, suspension and/or modification of the Approval, in addition to any other legal or equitable relief or remedy the EPA may choose to pursue.

#### RECORDKEEPING AND REPORTING CONDITIONS

- 18. Yale shall prepare and maintain all records and documents required by 40 CFR Part 761, including but not limited to the records required under Subparts J and K. A written record of the cleanup and the analytical sampling shall be established and maintained by Yale until such time as EPA approves in writing a request for an alternative disposition of such records. All records shall be made available for inspection by authorized representatives of EPA.
- 19. Yale shall submit a final report to EPA within 60 days of completion of the activities authorized under this Approval. At a minimum, this final report shall include: a narrative of the cleanup and disposal activities; characterization and confirmation sampling analytical results (if applicable); figure(s) detailing sampling locations; copies of the laboratory reports and accompanying analytical chains of custody (CD-ROM is acceptable); field and laboratory quality control/quality assurance checks; an estimate of the quantity of PCB waste disposed of; the size of the remediated area(s); copies of manifests and/or bills of lading; and copies of certificates of disposal or similar certifications issued by the disposer.
- 20. Required submittals shall be mailed to:

Kimberly N. Tisa, PCB Coordinator United States Environmental Protection Agency 1 Congress Street, Suite 1100 - CPT Boston, Massachusetts 02114-2023

Telephone: (617) 918-1527 Facsimile: (617) 918-0527

21. No record, report or communication required under this Approval shall qualify as a self-audit or voluntary disclosure under EPA audit, self disclosure or penalty policies.

\*\*\*\*\*\*\*

**END OF ATTACHMENT 1** 



## **APPENDIX B: PHOTOGRAPHS**



**Polyethylene Containment Construction** 



Concrete Floor Following Initial 4" Removal



**Containment and Filter** 



Area C Following Second Round of Concrete Removal



Area C Following Third Round of Removal (Concrete and Soil)



Area A Following Final Soil Removal



## **APPENDIX C: ANALYTICAL LABORATORY REPORTS**



195 Commerce Way Suite E Portsmouth, New Hompshire 03 603-436-5111 Fax 603-430-215 803-929-9906 ww.analyticslab.com

June 5, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Analytical Results Case Narrative Analytics # 63965 Yale Mason Bldg. Proj# 210954

Dear Mr. Franklin;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

Case Narrative/Non-Conformance Summary Sample Log Sheet - Cover Page CT Certification Page PCB Form 1 Data Sheet for Samples and Blanks Chromatograms PCB Form 10 Confirmation Results
PCB Form 3 MS/MSD (LCS) Recoveries Chain of Custody (COC) Forms

Analytics/J.C:A\_Narratives/WCI:Yale63965.dec Analytics Report 63965 page 0001 of 114

195 Commerce Way Suite E Portsmouth, New Hampshire 03601 603-436-5111 Fax 603-430-2151 800-929-9906 www.cnalyticslab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 63965 Revision: Rev. 0

Re: Yale Mason Building

Enclosed are the results of the analyses on your sample(s). Samples were received on 01 June 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

210954

Lab Number	Sample Date	Station Location	<u>Analysis</u>	Comments
63965-1	06/01/09	YMB-CS-CC01	EPA 8082 (PCBs only)	
63965-2	06/01/09	YMB-CS-CC02	EPA 8082 (PCBs only)	
63965-3	06/01/09	YMB-CS-CC03	EPA 8082 (PCBs only)	
63965-4	06/01/09	YMB-CS-CC04	EPA 8082 (PCBs only)	
63965-5	06/01/09	YMB-CS-CC05	EPA 8082 (PCBs only)	
63965-6	06/01/09	YMB-CS-CC06	EPA 8082 (PCBs only)	
63965-7	06/01/09	YMB-CS-CC07	EPA 8082 (PCBs only)	
63965-8	06/01/09	YMB-CS-CC08	EPA 8082 (PCBs only)	
63965-9	06/01/09	YMB-CS-CC09	EPA 8082 (PCBs only)	
63965-10	06/01/09	YMB-CS-CC10	EPA 8082 (PCBs only)	
63965-11	06/01/09	YMB-CS-CC11	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate call.

Authorized signature
Stephen L. Knolling yer Lab. Director

6/4/2009 Date

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QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions

PCBs by EPA Method 8082: Sample 63965-20 (10 mL) had final extract volumes greater than 5mL due to matrix affect. Samples 63965-1, 63965-2, 63965-6, 63965-10, 63965-18, 63965-19 and 63965-24 required dilution due to matrix affect or PCB

The closing continuing calibration standard (File#L19288SC) for the aqueous samples had high recovery for PCB 1016 on both columns. No analytes were detected in these samples and results were reported without qualification.

The MS/MSD analyzed on sample 63965-1 (YMB-CS-CC01) had high recoveries for PCB 1016 on column #1 and PCB 1260 on both columns due to the concentrations of PCB 1254 detected in the parent sample. In addition the MS had recovery for Tetrachloro-m-xylene (TCX) on column#1 below the laboratory acceptance criteria but within CT RCP criteria on column #2. Surrogate recoveries for the parent sample were in control. The laboratory control samples (L06019PSOX/LD06019PSOX) were in control for all analytes. Results were reported without qualification.

Decachorobiphenyl (DCB) had low recovery in the final closing standard (file# L19373SC) on column#1. Column#2 was in control for all analytes. Results were reported without qualification.

ANALYTICS Environmental Laboratory, LLC

Stephen Knollmeyer Laboratory Director

AnalyticsLLC:A\_Narratives:WCI:Yale63965.doc Analytics Report 63965 page 0002 of 114



195 Commerce Way Suite E Portsmouth, New Hampshire 036 603-436-5111 Fax 603-430-2151 800-929-9906 noshire 03801 www.analyticslab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180

Report Number: 63965 Revision: Rev. 0

Andover MA 01810 Re: Yale Mason Building

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 01 June 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis	Comments
63965-12	06/01/09	YMB-CS-CC12	EPA 8082 (PCBs only)	
63965-13	06/01/09	YMB-CS-CC13	EPA 8082 (PCBs only)	
63965-14	06/01/09	YMB-CS-CC14	EPA 8082 (PCBs only)	
63965-15	06/01/09	YMB-CS-CC15	EPA 8082 (PCBs only)	
63965-16	06/01/09	YMB-CS-CC16	EPA 8082 (PCBs only)	
63965-17	06/01/09	YMB-CS-CC17	EPA 8082 (PCBs only)	
63965-18	06/01/09	YMB-CS-CC18	EPA 8082 (PCBs only)	
63965-19	06/01/09	YMB-CS-CC19	EPA 8082 (PCBs only)	
63965-20	06/01/09	YMB-CS-CC99	EPA 8082 (PCBs only)	
63965-21	06/01/09	YMB-CS-CC20	EPA 8082 (PCBs only)	
63965-22	06/01/09	YMB-CS-CC21	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature
Supplier L. Knollneyer Lab. Director
Date

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195 Commerce Way Suite E Portsmouth, New Hampshire 03801 603-436-5111 Fax 603-430-2151 800-929-9536 www.ana.ytlcslab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 63965 Revision: Rev. 0

#### Re: Yale Mason Building

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 01 June 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	Analysis
63965-23	06/01/09	YMB-CS-CC22	EPA 8082 (PCBs only)
63965-24	06/01/09	YMB-CS-CC23	EPA 8082 (PCBs only)
63965-25	06/01/09	YMB-CS-CC24	EPA 8082 (PCBs only)
63965-26	06/01/09	YMB-CS-CC25	EPA 8082 (PCBs only)
63965-27	06/01/09	EB-01	EPA 8082 (PCBs only)

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen L. Knollmeyer Lab. Director

6/4/2009

Comments

Date

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#### Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
	- Cinio	74 24000 1017	7410001017	
Volatile Organic Compounds - D	rinking Wa			
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compoun	ds			
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
DAYH-L-CTAF				
PAH's by SIM d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobinhenyl		36-121	45-105	EFA 8270C
		33-141	30-125	
d14-p-terphenyl		33-141	50-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TC)	9	46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA0		30-150	30-150	
Gasoline Range Organics/TPH G	asoline			
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Dics	el			
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH
-				



#### **Laboratory Analysis** QA/QC Certification Form

Laboratory Name: Analytics Environmental Laboratory, LLC

Client: Woodard & Curran

Project Location: Yale Mason Building

Project Number: 63965

Sampling Date(s): 06/01/2009

Laboratory Sample ID(s): 63965-1 through 63965-27

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specificed in the CT DEP method-specific Reasonable Confidence Protocol documents)?	⊠ Yes	□ No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody documents(s)?	⊠ Yes	□ No
3	Were samples received at an appropriate temperature ( $4^{\circ}$ C $\pm$ $2^{\circ}$ )? If no, the attached narrative should include any explanation as the acceptability of samples received at other temperatures.	⊠ Yes	гд №
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	□ Yes	⊠ No
5	Were reporting limits specified on the chain-of-custody met?	⊠ Yes	□No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documentes?	⊠ Yes	□ No
7	Are project-specific QC samples included in this data set?	⊠ Yes	□ No

For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1 is "No", the data package does not meet the requirments for "Renonable Confidence."

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete

Authorized St. Kullyn

Position: <u>Laboratory Director</u>

Printed Name: Stephen Knollmeyer

June 05, 2009

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PCB DATA SUMMARIES

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: Lab OC

CLIENT SAMPLE ID

June 4, 2009 SAMPLE DATA

Lab Sample ID: B06029PW Matrix; Percent Solid: N/A Dilution Factor: Collection Date: Lab Receipt Date: Extraction Date: 06/02/09 Analysis Date:

PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit μg/L	Results μg/L	
PCB-1016	0.2	Ü	
PCB-1221	0.2	U	
PCB-1232	0.2	U	
PCB-1242	0.2	U	
PCB-1248	0.2	U	
PCB-1254	0.2	U	
PCB-1260	0.2	Ü	

Surrogate Standard Recovery

2.4,5.6-Tetrachloro-m-xylene 79 % 66 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS

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Mr. George Frankfin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: Lab QC June 4, 2009 SAMPLE DATA

Lab Sample ID: B06019PSOX Matrix: Soil Percent Solid: N/A Dilution Factor: 1.0 Collection Date: Lab Receipt Date:

Extraction Date:

06/01/09 Analysis Date: 06/03/09

PCB ANALYTICAL RESULTS				
COMPOUND	Quantitation Limit µg/kg	Results μg/kg		
PCB-1016	33	Ü		
PCB-1221	33	U		
PCB-1232	33	U		
PCB-1242	33	U		
PCB-1248	33	U		
PCB-1254	33	fì		
PCB-1260	33	U		
Surrogate Standard Recovery				

Decachlorobiphenyl U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

2,4,5,6-Tetrachloro-m-xylene

COMMENTS: Results are expressed on a dry weight basis

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83 %

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\060209-L\
Data File : L192803.D
Signal(s) : Signal #1: ECD1A.ch Signal

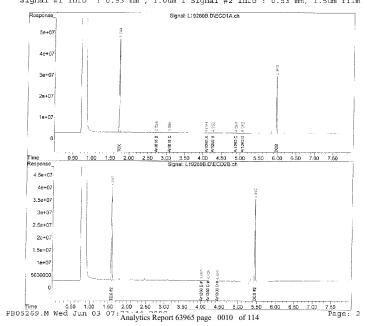
L192803.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 2 Jun 09 4:18 pm

Acq On Operator

Sample : B06029PW
Misc :
ALS Vial : 51 Sample Multiplier: 1

Integration File signal 1: PCBINT.E Integration File signal 2: PCBINT2.E Quant Time: Jun 03 07:23:44 2009 Quant Method: C:\msdchem\l\mm\l\mm\BTHODS\PB05269.M Quant Title : Aroclor 1016/1260 QLast Update : Wed May 27 07:25:55 2009 Response via : Initial Calibration Integrator: ChemStation

Volume Inj. : 3 ul Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



Quantitation Report (QT Reviewed)

Data Path :

C:\msdchem\1\DATA\060309-L\ L19293B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 9:33 am

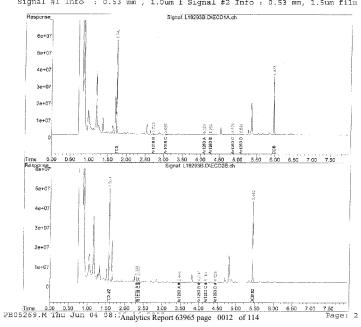
Data File Signal(s) Acq On Operator

Sample Misc ALS Vial B06019PSOX,,A/C

: SOIL : 1 Sample Multiplier: 1

Integration File signal 1: PCBINT.E
Integration File signal 2: PCBINT2.E
Quant Time: Jun 04 08:15:08 2009
Quant Method: C:\msdchem\lambda\mathbb{MS:15:08}
Quant Title: Aroclor 1016/1260
QLast Update: Wed May 27 07:25:55 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : 3 ul Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Field Sample ID: Lab OC

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: B06019PSOX RR Matrix: Percent Solid: N/A Dilution Factor: Collection Date: Lab Receipt Date: Extraction Date: 06/01/09

06/03/09

Analysis Date:

	PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit µg/kg	Results µg/kg		
PCB-1016	33	U		
PCB-1221	33	U		
PCB-1232	33	U		
PCB-1242	33	U		
PCB-1248	33	U		
PCB-1254	33	U		
PCB-1260	33	U		

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 93 % 82 %

Decachlorobiohenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS

Authorized signature Mplestell

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195 Commerce Way Partmouth, New Hampshire 0360 603-636-511 Fax 603-636-2161

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yaie Mason Building Project Number: 210954

Lab Sample ID: B06029PSOX Matrix: Soil Percent Solid: N/A Dilution Factor: Collection Date: Lab Receipt Date:

Field Sample ID: Lab QC

Extraction Date: 06/02/09 Analysis Date: 06/04/09

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	ប
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	τι
PCB-1260	33	U

Surrogate Standard Recovery

2,4,5,6-Tetrachioro-m-xylene 83 %

Decachlerobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Mulifull Analytics Report 63965 page 0015 of 114

Data Path Data File

C:\msdchem\1\DATA\060309-L\ L19322B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 6:20 pm Signal(s)

Quantitation Report

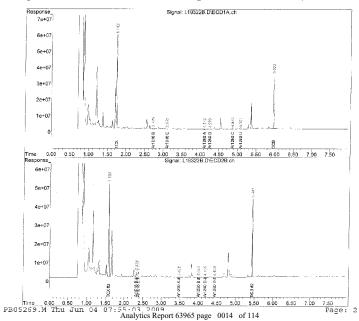
(Not Reviewed)

Acq On Operator Sample B06019PSOX,RR,,A/C Misc : SOIL
ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: PCBINT.E
Integration File signal 2: PCBINT2.E
Quant Time: Jun 04 07:55:02 2009
Quant Method: c:\msdchem\l\MBTHODS\PB05269.M
Quant Title: Aroclor 1016/1260
QLast Update: Wed May 27 07:25:55 2009
Response via: Initial Calibration

Integrator: ChemStation

Volume Inj. : 3 ul Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film



Quantitation Report (Not Reviewed)

C:\msdchem\1\DATA\060409-L\ L19346B.D Data Path :

Signal #1: BCD1A.ch Signal #2: ECD2B.ch 4 Jun 09 9:18 am

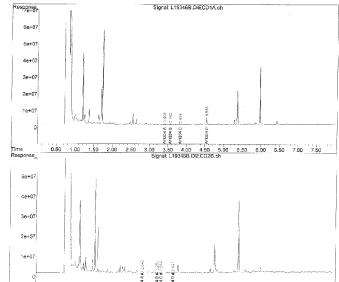
Data File : Signal(s) : Acq On : Operator

B06029PSOX,,A/C Sample

Misc : SOIL ALS Vial : 37 Sample Multiplier: 1

Integration File signal 1: events.e Integration File signal 1: events.e Quant Time: Jun 04 09:34:36 2009 Quant Method: C:\msdchem\1\METHODS\54SP5269.M Quant Title: QLast Update: Wed Jun 03 14:33:06 2009 Response via: Initial Calibration Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info :



Ar1254 B # 3 

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name:

Project Number: Field Sample ID: Lab QC Lab Sample ID: B06039PAS RR Matrix: Percent Solid: N/Λ Dilution Factor: Collection Date: Lab Receipt Date: Extraction Date: 06/03/09 Analysis Date:

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	Ū
PCB-1248	33	U
PCB-1254	33	υ
PCB-1260	33	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 99 % 77 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C COMMENTS:

Results are expressed on a dry weight basis.

Authorized signature Melchell

Analytics Report 63965 page 0017 of 114

analytics / extraoritic

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC01

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-1 Matrix: Solid Percent Solid: 96 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 Analysis Date:

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit μg/kg	Results µg/kg
PCB-1016	330	U
PCB-1221	330	, U
PCB-1232	330	Ū
PC8-1242	330	TI.
PCB-1248	330	U
PCB-1254	330	4430
PCB-1260	350	U

Surrogate Standard Recovery

2.4.5.6-Tetrachloro-m-xylene 86 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS:

Analytics Report 63965 page 0019 of 114

70 %

Authorized signature Multill

Quantitation Report (Not Reviewed)

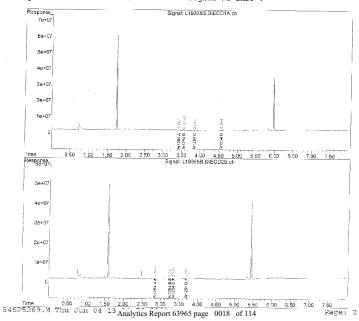
Data Path : C:\MSDCHEM\1\DATA\060409-L\
Data File : L19365B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acg On : 4 Jun 09 1:13 pm

Acq On Operator Sample Misc ALS Vial :
: B06039PAS,RR,,A/C
: SOIL
: 54 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 13:34:58 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L.

SDG: 93965

GC Column #1: STX-CLPesticides I

Sample: 63965-1,1:10

Column ID: 0.25 mm

Data File: L19360.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 10.3

Column ID: 0.25 mm

	Column #1	Column #2	y	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	4
PCB 1254	4430	4231	4.6	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

Quantitation Report (Not Reviewed)

Data Path:
Data File:
Signal(s):
Acq On:
Operator:
Sample: C:\MSDCHEM\1\DATA\060409-L\ L19360.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 4 Jun 09 11:44 am

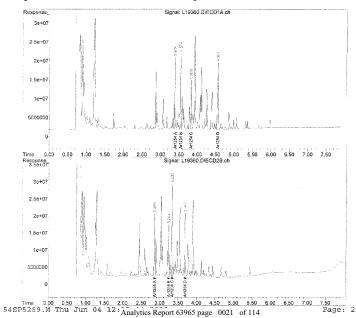
63965-1,1:10 Sample Misc

: SOIL : 50 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:15:44 2009
Quant Method: C:\msdchem\1\METHODS\548P5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

GC Column #1: STX-CLPesticides I

Sample: 63965-2,1:20

Column ID: 0.25 mm

Data File: I 19327 D

GC Column #2: STX-CLPesticides II

Dilution Factor: 20.8

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	15226	13858	9.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0023 of 114



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC02

June 4, 2009 SAMPLE DATA

06/03/09

Lab Sample ID: 63965-2 Matrix: Percent Solid: Solid 96 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 Analysis Date:

		PCB ANALYTICAL RESUL	TS
	COMPOUND	Quantitation Limit µg/kg	Results µg/kg
	PCB-1016	690	U
	PCB-1221	690	U
	PCB-1232	690	U
	PCB-1242	690	U
	PCB-1248	690	u
	PCB-1254	690	15200
	PCB-1260	690	U
		Surrogate Standard Recovery	
		2,4,5,6-Tetrachloro-m-xylene * Decachlorobiphenyl *	% %
-	U=Undetected	J=Estimated E=Exceeds Calibration Range	B=Detected in

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

COMMENTS: Results are expressed on a dry weight basis.

\* The surrogates were diluted out.

Authorized signature Meladell

Analytics Report 63965 page 0022 of 114

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Ouantitation Report (Not Reviewed)

Data Path

: C:\msdchem\1\DATA\060309-L\ : L19327.D : Signal #1: ECD1A.ch Signal #2: ECD2B.ch : 3 Jun 09 7:11 pm Data File Signal(s)

Acq On Operator Sample

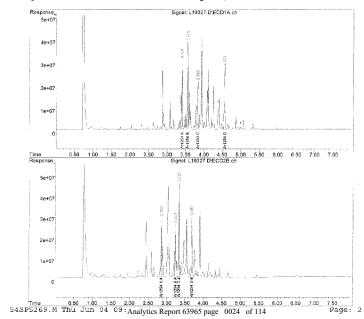
63965-2,1:20

Misc : SOIL ALS Vial : 27 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:40:43 2009
Quant Method: C:\msdchem\1\mETHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :





Field Sample ID: YMB-CS-CC03

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample 1D: 63965-3 Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 06/03/09 Analysis Date:

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	IJ
PCB-1232	33	Ľ
PCB-1242	33	U
PCB-1248	33	Ü
PCB-1254	33	58
PCB-1260	33	Ū

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 83 %

Decachiorobiphenyl 75 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Mulul

Analytics Report 63965 page 0025 of 114

Quantitation Report (Not Reviewed)

Data Path : Data File :

C:\msdchem\1\DATA\060309-L\ L19314.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 2:55 pm Signal(s) :

Acq On Operator Sample

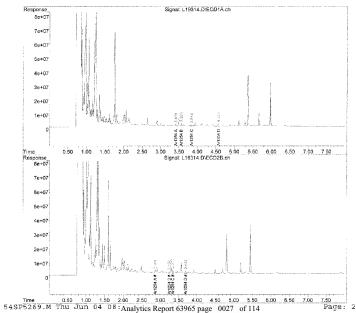
63965-3

Misc : SOIL
ALS Vial : 17 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 08:31:00 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-3 Data File: 1.19314 D

Column ID: 0.25 mm

Dilution Factor: 1.0

GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

> Column #1 Column #2

	COMMIN I. I			
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	7
PCB 1254	53	58	8.6	

4 Column to be used to flag RPD values greater than OC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 63965 page 0026 of 114

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yate Mason Building Project Number: 210954

Field Sample ID: YMB-CS-CC04

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-4 RX Matrix: Percent Solid: Solid 96 Dilution Factor: Collection Date: 1.0 06/01/09 Lab Receipt Date: 06/01/09 06/02/09 Extraction Date: Analysis Date: 06/04/09

PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit µg/kg	Results µg/kg	
PCB-1016	33	Ū	
PCB-122I	33	U	
PCB-1232	33	U	
PCB-1242	33	U	
PCB-1248	33	Ŋ	
PCB-1254	33	68	
PCB-1260	33	U	

2,4,5,6-Tetrachtoro-m-xylene

Decachlorohiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis

PC3 Report

Authorized signature Mulchell

Analytics Report 63965 page 0028 of 114

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-4,RX

Column ID: 0.25 mm

Data File: L19356.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	63	68	6.7	

 $\pm$  Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0029 of 114

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building

Lab Sample ID: 63965-5 Solid Percent Solid: 97

Project Number: 210954 Field Sample ID: YMB-CS-CC05

Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 Analysis Date:

Matrix:

PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit µg/kg	Results μμ/kg	
PCB-1016	33	υ	
PCB-1221	33	Ū	
PCB-1232	33	υ	
PCB-1242	33	U	
PCB-1248	33	บ	
PCB-1254	33	31 J	
PCB-1260	33	U	

Surrogate Standard Recovery

2.4.5.6-Tetrachloro-m-xylene 75 %

Decachlorobiphenyl

73 %

U=Undetected I=Estimated E=Exceeds Calibration Range B=Detected in

COMMENTS:

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Authorized signature Mplwbll Analytics Report 63965 page 0031 of 114

Data Path : C:\MSDCHEM\1\DATA\060409-L\
Data File : L19356.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 4 Jun 09 11:02 am Signal(s) Acq On Operator

Quantitation Report

63965-4,RX Sample

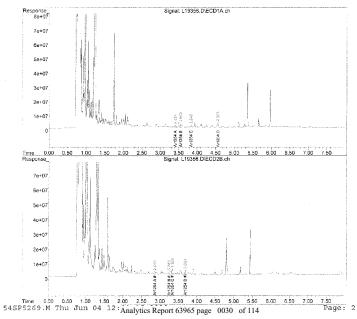
Misc : SOIL ALS Vial : 46 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:01:15 2009
Quant Method: C:\msdchem\1\METHODS\548P5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

(Not Reviewed)

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-5

Column ID: 0.25 mm

Data File: L19323.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column iD: 0.25 mm

	Column ≠1	Column #2		
COMPOUND	SAMPLE RESULT (og/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	30 🕇	31 🗸	3.5	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 63965 page 0032 of 114

Quantitation Report (Not Reviewed)

Data Path C:\msdchem\1\DATA\060309-L\

Data Fath Data File Signal(s) Acq On Operator Sample L19323.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 6:30 pm

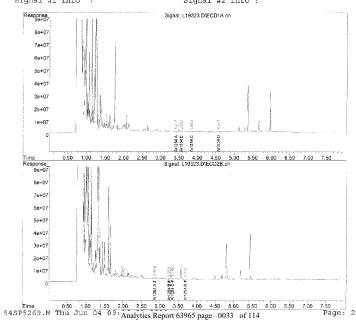
63965-5 Misc

: SOIL : 23 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:36:52 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



analytics / Mobiliary ILC

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA | 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC06

line 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-6 Matrix: Solid Percent Solid: 95 Dilution Factor: Collection Date: 2.1 06/01/09 Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: Analysis Date: 06/03/09

PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit µg/kg	Results $\mu g/kg$	
PCB-1016	69	U	
PCB-1221	69	U	
PCB-1232	69	U	
PCB-1242	69	U	
. PCB-1248	69	U	
PCB-1254	69	318	
PCB-1260	69	U	

Surrogate Standard Recovery

52 % 2,4,5,6-Tetrachloro-m-xylene

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

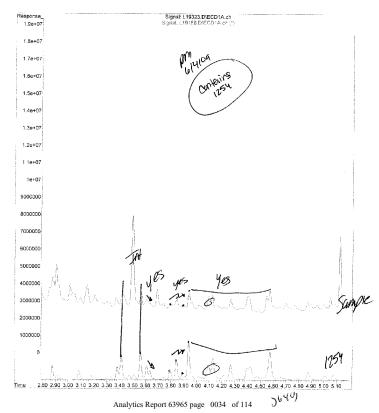
COMMENTS: Results are expressed on a dry weight basis

Authorized signature Mylerlall Analytics Report 63965 page 0035 of 114

:C:\msdchem\1\DATA\060309-L\L19323.D

3 Jun 09 6:30 pm using AcqMethod PEST.M

File :C:\msdchen
Operator : 3 Jun 03
Instrument : Inst L
Sample Name: 63965-5
Misc Info : SOIL
Vial Number: 23



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-6,1:2,,A/C

Column ID: 0.25 mm

Data File: L19337.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 2.1

Column ID: 0.25 mm

Column #1 Column #2 COMPOUND SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD PCB 1254 318 10.6

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 63965 page 0036 of 114

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\060309-L\

Data File Signal(s) Acq On

: L19337.D : Signal #1: ECD1A.ch Signal #2: ECD2B.ch : 3 Jun 09 8:54 pm

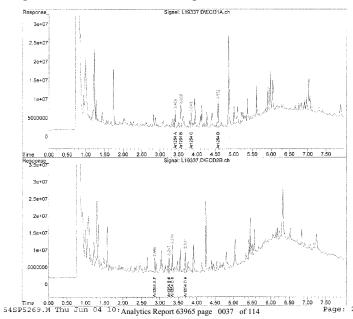
Operator Rm 614109 63965-6,1:2,,A/C (Sig #1); 63965 Sample Misc

: SOTL : 35 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 10:50:39 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides 1

Sample: 63965-7, 1:2

Column ID: 0.25 mm

Data File: L19371.D

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

Dilution Factor: 2.0

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	1342	1328	1.1	

# Column to be used to flag RPD values greater than QC limit of 40%

Comments:

199 Contracto Way Portmouth, New Hompshite 028( 603-426-51) 1 Fax 603-490-215)

Woodard & Curran 35 NT: Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Yale Mason Building

Project Name:

Project Number: 210954 Field Sample ID: YMB-CS-CC07

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-7 Solid Matrix: Percent Solid: 96 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 Analysis Date:

PCB ANALYTICAL RESULTS				
COMPOUND	Quantitation Limit $\mu g/kg$	Results μg/kg		
PCB-1016	66	Ú		
PCB-1221	66	U		
PCB-1232	66	U		
PCB-1242	66	U		
PCB-1248	66	U		
PCB-1254	66	1340		
PCB-1260	66	U		
	Surrogate Standard Recovery			
	2,4,5,6-Tetrachlero-m-xylenc 102 %			
	Decachlorobiphenyl 79 %			

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C COMMENTS

Results are expressed on a dry weight basis.

Authorized signature Whilesfull

Analytics Report 63965 page 0038 of 114

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\060409-L\
Data Pile : L19371.D
Signal(s): Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 4 Jun 09 2:15 pm
Operator :

63965-7, 1:2 Sample

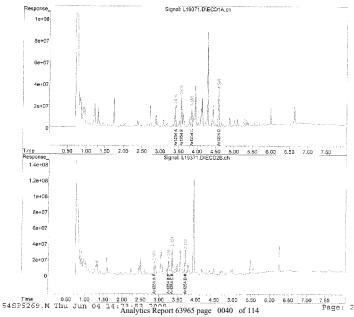
Misc

: SOIL : 60 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 14:23:52 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



Mr. George Franklin Woodard & Chrran 35 NE Business Center Suite 180 Andover MA 01810

Field Sample ID: YMB-CS-CC08

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: 63965-8 Matrix: Solid Percent Solid: 92 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 06/03/09 Analysis Date:

1	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit μg/kg	Results µg/kg
PCB-1016	36	Ü
PCB-[221	36	U
PCB-1232	36	U
PCB-1242	36	U
PCB-1248	36	U
PCB-1254	-36	35 J
PCB-1260	36	U

Surrogate Standard Recovery

2,4,5.6-Tetrachtoro-m-xylene 70 % 64 %

Decachlorobiphenyl

U=Undetected I=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Mylles dell

Analytics Report 63965 page 0041 of 114

Quantitation Report (Not Reviewed)

Data Path Data File

C:\msdchem\1\DATA\060309-l\ L19328.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 7:22 pm

Signal(s) Acq On Operator

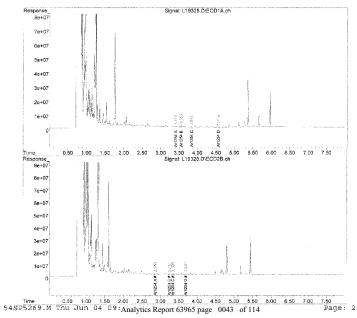
63965-8

Sample : 63965-8 Misc : SOIL ALS Vial : 28 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:41:05 2009
Quant Method: C:\msdchem\l\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: I

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-8

Column ID: 0.25 mm

Data File: L19328.D

GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

Dilution Factor: 1.1

	Column#1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	30 J	35 <b>T</b>	15.0	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10 Analytics Report 63965 page 0042 of 114

analytics / emterment

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA. 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC09 line 4, 2009 SAMPLE DATA

Lab Sample ID: Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 06/01/09 Lab Receipt Date: Extraction Date: 06/01/09 06/01/09

06/03/09

Analysis Date:

	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1016	33	Ū
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	υ
PCB-1248	33	U
PCB-1254	33	274
PCB-1260	33	U
3	Surrogate Standard Recovery	

2,4,5,6-Tetrachloro-m-xylene

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS:

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C Results are expressed on a dry weight basis.

PCB Report

Authorized signature Mulchell

Analytics Report 63965 page 0044 of 114

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-9

Column ID: 0.25 mm

Data File: L19316.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

-	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	μ
PCB 1254	274	256	6.6	

# Column to be used to flag RPD values greater than OC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0045 of 114

analytics - \ \_\_\_\_ crytonnerge

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Field Sample ID: YMB-CS-CC10

Project Number: 210954

Solid 95 Matrix: Percent Solid: Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: Analysis Date: 06/03/09

Lab Sample ID:

June 4, 2009

SAMPLE DATA

63965-10

COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1016	69	U
PCB-1221	69	U
PCB-1232	69	U
PCB-1242	69	U
PCB-1248	69	U
PCB-1254	69	311
PCB-1260	69	U

Surrogate Standard Recovery

2,4.5,6-Tetrachloro-m-xylene 42 % 72 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Collibration Range B=Detected in

METRIOFOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-816 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

Authorized signature Mulabell Analytics Report 63965 page 0047 of 114

Quantitation Report

Data Path Data File Signal(s) C:\msdchem\l\DATA\060309-L\
L19316.D
Signal #1: ECD1A.ch Signal #2: ECD2B.ch

3 Jun 09 3:15 pm

Acq On Operator Sample Misc

Operator : Sample : 63965-9 Misc : SOIL ALS Vial : 19 Sample Multiplier: 1

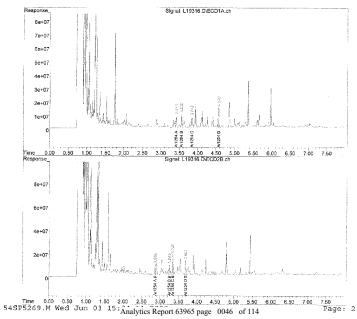
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 03 15:34:10 2009
Quant Method: C:\msdchem\l\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

(Not Reviewed)

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-10,1:2,,A/C

Column ID: 0.25 mm

Data File: L19338.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 2.1

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	4
PCB 1254	311	278	11.1	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

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Quantitation Report (Not Reviewed)

Data Path Data File Signal(s)

C:\msdchem\1\DATA\060309-L\ L19338.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 9:05 pm

Acq On Operator Sample 63965-10,1:2,,A/C Misc

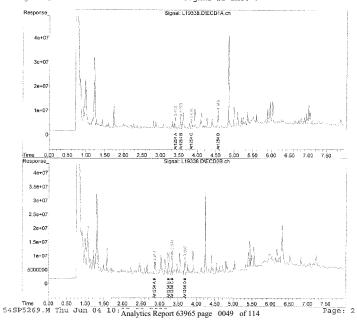
SOIL 36 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Ouant Time: Jun 04 10:16:58 2009
Ouant Method: C:\msdchem\l\METHODS\54SP5269.M
Ouant Title:
Clast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration

Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

GC Column #1: STX-CLPesticides I

Sample: 63965-11

Column ID: 0.25 mm

Data File: L19326.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column	Column		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	386	368	4.9	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC11

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-11 Matrix: Solid Percent Solid: 98 Dilution Factor: 1.0 Collection Date: 06/01/09 06/01/09 Lah Receipt Date: Extraction Date: 06/01/09 06/03/09 Analysis Date:

	PCB ANALYTICAL RESUL	TS
COMPOUND	Quantitation Limit μg/kg	Results μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	386
PCB-1260	33	U
	Surrogate Standard Recovery	
	2,4,5,6-Tetrachloro-m-xylene 65 Decachlorobiphenyl 71	% %
11_Lindetected	J=Estimated E=Exceeds Calibration Range	B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Results are expressed on a dry weight basis.

Authorized signature Mlunkell

(Not Reviewed)

Analytics Report 63965 page 0050 of 114

Quantitation Report

Data Path : C:\msdchem\1\DATA\060309-L\
Data File : L19326.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 3 Jun 09 7:01 pm

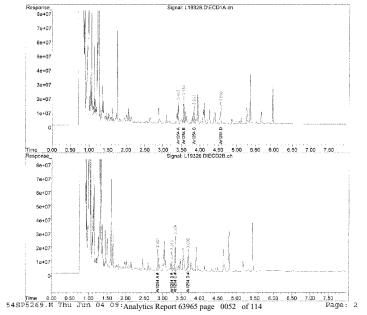
Acq On Operator Sample 63965-11

Misc : SOIL
ALS Vial : 26 Sample Multiplier: 1

Integration File signal 1: events2.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:39:33 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :





Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Lab Sample ID: 63965-12 Matrix: Percent Solid: 98 Dilution Factor: Collection Date: 06/01/09 06/01/09 Lab Receipt Date: Extraction Date: 06/01/09

Analysis Date:

Project Number:	210954
Field Sample ID:	YMB-CS-CC12

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg	
PCB-1016	33	υ	
PCB-1221	33	U	
PCB-1232	33	U	
PCB-1242	33	U	
PCB-1248	33	U	
PCB-1254	33	25 J	
PCB-1260	33	U	

Surrogate Standard Recovery

2.4.5.6-Tetrachloro-m-xylene 58 % Decachlorobiphenyi 55 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

COMMENTS: Results are expressed on a dry weight basis

Authorized signature Melsukill

Analytics Report 63965 page 0053 of 114

Quantitation Report (OT Reviewed)

Data Path : C:\msdchem\1\DATA\060309-L\
Data File : L19332.D
Signal(s) : Signal #1: BCD1A.ch Signal #2: ECD2B.ch
Acq On : 3 Jun 09 8:03 pm
Operator :

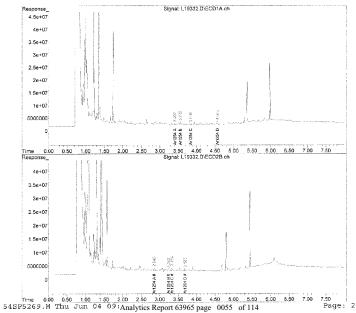
63965-12,,A/C Sample

Misc ALS Vial : SOIL : 32 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:48:12 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides 1

Sample: 63965-12,,A/C

Column ID: 0.25 mm

Data File: L19332 D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	ti
PCB 1254	21	25	18.8	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

## PCB FORM 10 Analytics Report 63965 page 0054 of 114

analytics A environmental

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC13 SAMPLE DATA

Lab Sample ID: 63965-13 Matrix: Solid Percent Solid: 97 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09

Analysis Date:

COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	υ
PCB-1221	33	U
PCB-1232	. 33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	47
PCB-1260	33	U

2.4.5.6-Tetrachtore-m-xylene 78 % 72 % Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

Authorized signature Myllufull

Analytics Report 63965 page 0056 of 114

#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-13

Column ID: 0.25 mm

Data File: L19324.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	R <b>P</b> D	ä
PCB 1254	47	45	4.2	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

PCB FORM 10 Analytics Report 63965 page 0057 of 114

analytics / Market /

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: 63965-14 Matrix: Percent Solid: Solid 98 Dilution Factor: Collection Date: 06/01/09

Field Sample ID: YMB-CS-CC14

Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: Analysis Date: 06/03/09

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg	
PCB-1016	33	υ	
PCB-1221	33	U	
PCB-1232	33	U	
PCB-1242	33	U	
PCB-1248	33	U	
PCB-1254	33	20 J	
PCB-1260	33	U	

Surrogate Standard Recovery

2,4,5.6-Tetrachloro-m-xylene 65 %

Decachlerobiphenyl

73 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3549C.

COMMENTS: Results are expressed on a dry weight ba

PCB Report

Authorized signature Myllelell Analytics Report 63965 page 0059 of 114

: C:\msdchem\1\DATA\060309-L\ : L19324.D : Signal #1: ECD1A.ch Signal #2: ECD2B.ch : 3 Jun 09 6:40 pm Data Path : Data File : Signal(s) : Acq On :

Quantitation Report

Operator

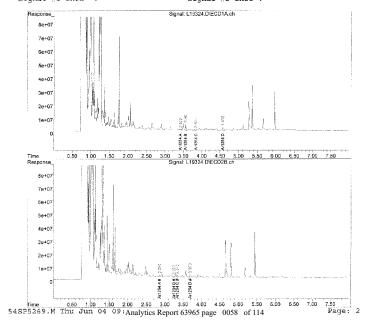
Operator:
Sample: 63965-13
Misc: SOTL
ALS Vial: 24 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:37:09 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :

(Not Reviewed)



# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L.

SDG: 63965

GC Column #1: STX-CLPesticides 1

Sample: 63965-14

Column ID: 0.25 mm

Data File: L19315.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2	
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD #
PCB 1254	20	19	2.6

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0060 of 114

(QT Reviewed) Quantitation Report C:\msdchem\1\DATA\060309-L\ Data Path : Data File Signal(s) Acq On Signal #1: ECD1A.ch Signal #2: ECD2B.ch 3 Jun 09 3:05 pm Operator 63965-14 Sample Misc ALS Vial SOIL 18 Sample Multiplier: 1 Integration File signal 1: events.e Integration File signal 2: events2.e Quant Time: Jun 04 08:42:09 2009 Quant Method: C:\msdchem\1\METHODS\54SP5269.M Quant Title : QLast Update : Wed Jun 03 14:33:06 2009 Response via : Initial Calibration Integrator: ChemStation Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Signal: L19315.D\ECD1A.ch Response, 7e+07 5e+07 4e+07 3e+07 2e+07 1e+07

V1254.A

1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal L19315.DiECD2B.ch

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Time 0.50 1.50 1.50 2.50 2.50 3.50 4.50 4.50 5.50 6.50 6.60 6.50 7.00 7.50 54SP5269.M Thu Jun 04 08:Analytics Report 63965 page 0061 of 114 Page: 2

Instrument ID: L.

6e+07

5e+07

3e+07

2e+07

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-15

Column ID: 0.25 mm

Data File: L19325.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	49	43	14.8	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0063 of 114 environmental

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC15

June 4, 2009 SAMPLE DATA

63965-15 Lab Sample ID: Matrix: Solid Percent Solid: Dilution Factor: 97 1.0 Collection Date: Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: 06/01/09 06/03/09 Analysis Date:

COMPOUND	Quantitation Lemit µg/kg	Results μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	49
PCB-1260	33	U

71 %

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

2,4,5,6-Tetrachloro-m-xylene Decachlorobiphonyl

Results are expressed on a dry weight hasis.

Authorized signature Mulinbell

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Quantitation Report

(Not Reviewed)

: C:\msdchem\1\DATA\060309-L\ Data Path

Data File : L19325.D Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch Acq On : 3 Jun 09 6:51 pm Operator :

63965-15 Sample

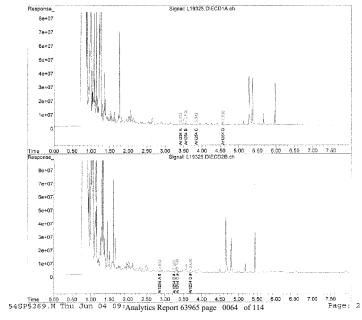
Misc : SOIL ALS Vial : 25 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:39:27 2009
Quant Method : C:\msdchem\1\METHODS\548P5269.M
Quant Title :
QLast Update : Wed Jun 03 14:33:06 2009
Reproper via : Initial Calibration

Response via : Initial Calibration Integrator: ChemStation

Volume Inj Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



Field Sample ID: YMB-CS-CC16

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: 63965-16 Solid Matrix: Percent Solid: 94 1.0 Dilution Factor: Collection Date: Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: 06/01/09 06/04/09 Analysis Date:

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results μg/kg	
PCB-1016	33	U	
PCB-1221	33	U	
PCB-i232	33	U	
PCB-1242	33	U	
PCB-1248	33	U	
PCB-1254	33	90	
PCB-1260	33	Ų	

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 56 % 64 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detec METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Results are expressed on a dry weight basis.

Authorized signature Mullill

Analytics Report 63965 page 0065 of 114

Quantitation Report (Not Reviewed)

Data Path Data File

Signal(s) :

C:\MSDCHEM\1\DATA\060409-L\ L19367.D Sigmal #1: ECD1A.ch Sigmal #2: ECD2B.ch 4 Jun 09 1:34 pm Acq On Operator Sample

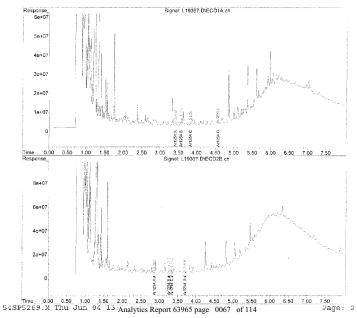
63965-16

Misc : SOTL
ALS Vial : 56 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 13:51:17 2009
Quant Method: C:\msdchem\11MBTHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



# COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1: STX-CLPesticides I

GC Column #2: STX-CLPesticides II

Sample: 63965-16

Dilution Factor: 1.0

Column ID: 0.25 mm

Data File: L19367.D

Column ID: 0.25 mm

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	И
PCB 1254	85	90	5,5	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0066 of 114

## analytics \ www.

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954

Field Sample ID: YMB-CS-CC17

June 4, 2009 SAMPLE DATA

06/03/09

Lab Sample ID: 63965-17 Matrix: Solid Percent Solid: 95 Dilution Factor: 1.0 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 06/01/09 Extraction Date:

Analysis Date:

COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1616	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	45
PCB-1260	33	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 67 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Gxcceds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight basis

### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides 1

Sample: 63965-17

Column ID: 0.25 mm

Data File: L19317.D

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	45	42	6.9	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10 Analytics Report 63965 page 0069 of 114

analytics / and analytics

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Field Sample ID: YMB-CS-CC18

June 5, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: 63965-18 Matrix: Solid Percent Solid: 96 Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 06/04/09 Analysis Date:

PCB ANALYTICAL RESULTS				
COMPOUND	Quantitation Limit µg/kg	Results µg/kg		
PCB-1016	170	U		
PCB-1221	170	U		
PCB-1232	170	υ		
PCB-1242	170	υ		
PCB-1248	170	υ		
PCB-1254	170	2180		
PCB-1260	170	IJ		

Surrogate Standard Recovery

2.4.5.6-Tetrachioro-m-xylene 87 %

Decachlorobiphenyl

81 % U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

COMMENTS:

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Quantitation Report

Data Path : C:\msdchem\lDATA\060309-L\
Data File : L19317.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 3 Jun 09 3:26 pm
Operator : Capendo : 6865513

63965-17

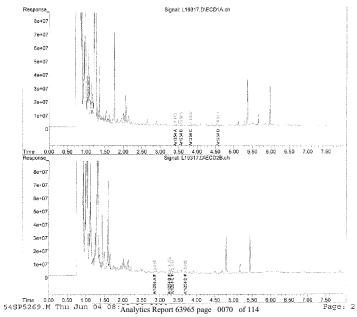
Sample

Misc : SOIL ALS Vial : 20 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 08:52:53 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

(Not Reviewed)

Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info :



# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-18, 1:5

Column ID: 0.25 mm

Data File: 1.19370.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 5.2

Column ID: 0.25 mm

	Column #1	Column #2		
OMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	я
PCB 1254	2165	2178	0.6	

# Column to be used to flag RPD values greater than QC limit of 40%

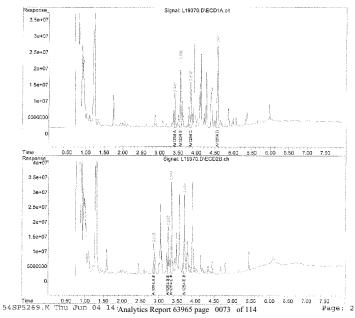
\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 63965 page 0072 of 114

Quantitation Report (Not Reviewed) Data Path : C:\MSDCHEM\1\DATA\060409-L\ Data File Signal(s) Acq On E. (abbethau) (1041A(000409-5) L19370.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 4 Jun 09 2:05 pm Acq on Operator 63965-18, 1:5 Sample Misc Misc : SOTL ALS Vial : 59 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 14:14:35 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation Volume Inj. Signal #1 Phase Signal #1 Info Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-19,1:10

Column ID: 0.25 mm

Data File: L19330.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 10.4

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	1283	1110	14.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0075 of 114

190 Commerce Way Popernouth, New Hampelife 3390 503-456-5111 Fax 603 430-2151 500-450-5007

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Yate Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC19

Project Name:

June 5, 2009 SAMPLE DATA

Lab Sample ID: 63965-19 Matrix: Percent Solid: Solid Dilution Factor: 10 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/01/09 Analysis Date: 06/03/09

	PCB ANALYTICAL RESULTS					
СОМРО	UND	Quantitation Limit µg/kg			Res #8	
PCB-1016		330			L	ı
PCB-1221		330			Ĺ	ı
PCB 1232		330			Ĺ	ı
PCB-1242		330			τ	
PCB-1248		330			τ	
PCB-1254		330			128	80
PCB-1260		330			t	r
	Sur	rogate Standard Recovery				
	2,45,6	-Tetrachloro-m-xylene	70	%		
	De	reachlorobiphenyl	125	96		

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

Results are expressed on a dry weight basis

Authorized signature Mulesabell

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Quantitation Report (Not Reviewed)

Data Path Data File

: C:\msdchem\1\DATA\060309-L\ : L19330.D : Signal #1: ECD1A.ch Signal #2: ECD2B.ch : 3 Jun 09 7:42 pm Signal(s)

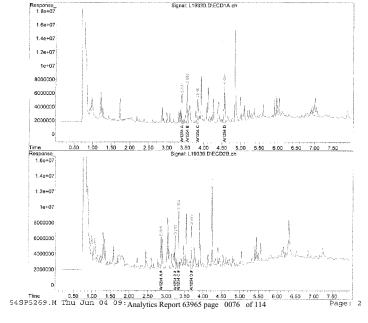
Acq On Operator Sample 63965-19,1:10

Misc : SOIL ALS Vial : 30 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 09:44:40 2009
Quant Method: C:\msdchem\l\METHODS\54SP5269.M
Quant Title: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :

Signal: L19330 DIECD1A ch



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC99 June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-20 Matrix: Percent Solid: Solid Dilution Factor: Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 06/02/09 Extraction Date: Analysis Date: 06/04/09

	PCB ANALYTICAL RESULTS			
COMPOUND	Quantitation Limit µg/kg	Results µg/kg		
PCB-1016	69	U		
PCB-1221	69	U		
PCB-1232	69	Ľ:		
PCB-1242	69	U		
PCB-1248	69	υ		
PCB-1254	69	370		
PCB-1260	69	fl.		
	Surrogate Standard Recovery			
	2,4,5.6-Tetrachloro-m-xylene 63 %			
	Decachlorobiphenyl 67 %			

U=Undetected J=Estimated E=Exceeds Calibration Range B=Derected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight basis.

PGB Report

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Quantitation Report (Not Reviewed)

C:\MSDCHEM\1\DATA\060409-L\ Data Path :

Data File :

L19362.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 4 Jun 09 12:05 pm Signal(s) Acq On Operator

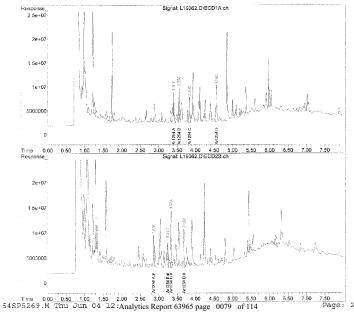
63965-20,,A/C Sample

Misc : SOIL
ALS Vial : 52 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:17:36 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-20..A/C

Column ID: 0.25 mm

Data File: L19362.D

GC Column #2: STX-CLPesticides il Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (og/kg)	SAMPLE RESULT (ug/kg)	RPD	y
PCB 1254	370	337	9.1	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10 Analytics Report 63965 page 0078 of 114

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195 Commerce Way Fartemouth, New Hampshire 0380 603-436-5111 Fax 603-430-2151 500-030-0004

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC20

fune 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-21 Matrix: Solid Percent Solid: 94 Dilution Factor: 06/01/09 Collection Date: Lab Receipt Date: 06/01/09 Extraction Date: 06/02/09 Analysis Date: 06/04/09

	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	163
PCB-1260	33	Ü
	Surrogate Standard Recovery	
	2,4,5,6-Tetrachloro-m-xylene 53 %	
	Decachlorobiphenyl 53 %	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS:

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Analytics Report 63965 page 0080 of 114

#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-21..A/C

Column ID: 0.25 mm

Data File: L19363.D

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

Column #1 Colonui #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	163	[40	15.1	

4 Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0081 of 114

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954

Field Sample ID: YMB-CS-CC21

June 4, 2009 SAMPLE DATA

06/04/09

Lab Sample ID: 63965-22 Matrix: Percent Solid: Solid 96 Dilution Factor: Collection Date: 06/01/09 06/01/09 06/02/09 Lab Receipt Date: Extraction Date:

Analysis Date:

	PCB ANALYTICAL RESULTS				
COMPOUND	Quantitation Limit µg/kg	Results #g <sup>7k</sup> g			
PCB-1016	33	U			
PCB-1221	33	U			
PCB-1232	33	U			
PCB-1242	33	υ			
PCB-1248	33	IJ			
PCB-1254	33	62			
PCB-1260	33	U			

Surrogate Standard Recovery

2.4,5,6-Tetrachlero-m-xylene 57 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

68 %

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis

PIE Report

Analytics Report 63965 page 0083 of 114

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Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\060409-L\
Data File : L19363.D
Signal(s) : Signal #1: BCDlA.ch Signal #2: ECD2B.ch
Acq On : 4 Jun 09 12:15 pm

Operator

63965-21,,A/C Sample Misc

: SOIL : 53 Sample Multiplier: 1 Misc ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:24:29 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLeat Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :

Response\_ Signal: L19363.D\ECD1A.ch 4e+07 3 Se+07 3e+07 2.5e-07 2e+07 1.5e - 07 16+07 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal L19383.DVECD2B.ch Response 3.5e+07 3e+07 2.5e+07 1.50+07 18107 

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1; STX-CLPesticides I

Sample: 63965-22,,A/C

Column ID: 0.25 mm

Data File: L19349.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

Column #1 Column #2

COMPOUND SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD PCB 1254

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 63965 page 0084 of 114

Integration File signal 1: events.e Integration File signal 2: events2.e Quant Time: Jun 04 11:57:38 2009 Quant Method: C:\msdchem\1\METHODS\54SP5269.M Quant Title : QLast Update : Wed Jun 03 14:33:06 2009 Response via : Initial Calibration Integrator: ChemStation Volume Inj. Signal #1 Phase Signal #1 Info Signal: L19349.D\ECD1A.ch 4e+07 3.5e+07 3e+07 2.50+07 2e+07 16+07 5000000 Ar1254 A Ar1254 B Ar1254 C 1.00 Time Response\_ 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 8.50 7.00 7.50 Signal L19349.D\ECD2B.ch 4e+07 3.5e+07 3e+07 2.5e+07 2e+07 1.5e+07 ATES BENE 
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Quantitation Report

Li9349.D Signal #1: ECDIA.ch Signal #2: ECD2B.ch 4 Jun 09 9:49 am

Data Path : C:\MSDCHEM\1\DATA\060409-L\
Data File : L19349.D
Signal(s) : Signal #1: ECDLA.ch Signal
Acq On : 4 Jun 09 9:49 am

: : 63965-22,,A/C : SOIL : 40 Sample Multiplier: 1

Operator

Sample Misc ALS Vial

(Not Reviewed)

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: 1.

SDG: 63965

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

Sample: 63965-23

Data File: L19357.D

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

Dilution Factor: 1.0

	Column #1	Countin #2		
COMPOUND	SAMPLE RESULT (ng/kg)	SAMPLE RESULT (ug/kg)	RPD	g
PCB 1254	208	196	6.0	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 63965 page 0087 of 114



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC22

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-23 Matrix: Solid Percent Solid: Dilution Factor: 97 1.0 Collection Date: Lab Receipt Date: 06/01/09 06/01/09 Extraction Date: Analysis Date: 06/02/09 06/04/09

	PCB ANALYTICAL R	ESUL	TS		
COMPOUND	Quantitation Limit µg/kg			Results µg/kg	
PCB-1016	33			U	
PCB-1221	33			U	
PCB-1232	33			· U	
PCB-1242	33			U	
PCB-1248	33			U	
PCB-1254	33			208	
PCB-1260	33			U	
	Surrogate Standard Recove	ry			
	2,4,5,6-Tetrachloro-m-xylene	74	95		

U=Undeceted J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Livaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

Results are expressed on a dry weight basis.

Authorized signature Mulhell

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Quantitation Report (Not Reviewed)

Data Path Data File : C:\MSDCHEM\1\DATA\060409-L\

Data File : L19357.D Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch Acq On : 4 Jun 09 11:12 am

Acq On Operator Sample 63965-23

Misc : SOIL
ALS Vial : 47 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:03:24 2009
Quant Method : C:\msdchem\1\METHODS\54SP5269.M
Quant Title :
QLast Update : Wed Jun 03 14:33:06 2009
Response via : Intital Calibration

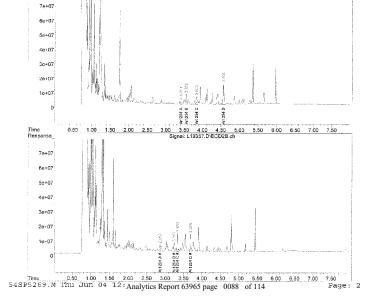
Response via : Initial Calibration Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Response 8e+07

Signal #2 Phase: Signal #2 Info :

Signal: L19357.D\ECD1A.ch



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA. 01810

Field Sample ID: YMB-CS-CC23

June 4, 2009

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

Lab Sample ID: 63965-24 Matrix: Solid Percent Solid: Dilution Factor: 5.0 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/02/09 Analysis Date: 06/04/09

1	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	170	U
PCB-1221	170	υ
PCB-1232	170	υ
PCB-1242	170	U
PCB-1248	170	U
PCB-1254	170	1560
PCB-1260	170	U

Surrogate Standard Recovery

2,4,5,6-Totrachloro-m-xylene 56 % Decachlorobiphenyl

U=Undetected J=Estimated E=Execods Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB Report

Authorized signature Mulchell

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Quantitation Report (Not Reviewed)

Data Path : Data File :

C:\MSDCHEM\1\DATA\060409-L\ L19359.D Sigmal #1: BCD1A.ch Sigmal #2: ECD2B.ch 4 Jun 09 11:34 am Signal(s) Acq On Operator Sample

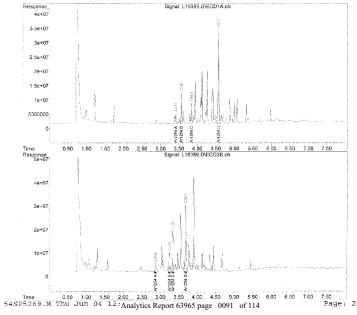
63965-24,1:5

Misc : SOIL
ALS Vial : 49 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:15:29 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-24.1:5

Column ID: 0.25 mm

Data File: L19359.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 5.0

Column 1D: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	1565	1448	7.7	

 ${\tilde \tau}$  Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10 Analytics Report 63965 page 0090 of 114



195 Commerce Way Pottstrucuth, New Hampshire (283 603-436-511 Fax:603-436-215) 503-636-510 Fax:603-436-2151

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Field Sample ID: YMB-CS-CC24

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954

June 4, 2009 SAMPLE DATA Lab Sample ID: 63965-25 Matrix: Solid

Percent Solid: 97 Dilution Factor: 1.0 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/02/09 Analysis Date: 06/04/09

	Quantitation	Results
COMPOUND	Quantitation Limit µg/kg	μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	Ū
PCB-1248	33	U
PCB-1254	33	209
PCB-1260	33	U

2.4.5.6-Tetrachloro-m-xylene 65 %

Decachlorobiphenyl

50 %

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Mylhell

Analytics Report 63965 page 0092 of 114

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides i

Sample: 63965-25

Column ID: 0.25 mm

COMPOUND

PCB 1254

Data File: L19354 D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

Column #1 Column #2 SAMPLE RESULT (ng/kg) SAMPLE RESULT (ag/kg) RPD 209

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

PCB FORM 10

Analytics Report 63965 page 0093 of 114

analytics 4

Mr. George Franklin Woodard & Curran 35 NF Business Center Suite 180 Andover MA 01810

June 4, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC25

Lab Sample ID: 63965-26 Matrix: Percent Solid: Solid 97 Dilution Factor: Collection Date: 1.0 06/01/09 06/01/09 06/02/09 Lab Receipt Date: Extraction Date: Analysis Date: 06/04/09

PCB ANALYTICAL RESULTS						
COMPOUND	Quantitation Limit µg/kg	Results μg/kg				
PCB-1016	33	τ				
PCB-1221	33	Ų				
PCB-1232	33	U				
PCB-1242	33	U				
PCB-1248	33	U				
PCB-1254	33	115				
PCB-1260	33	υ				
165-1200						

Surrogate Standard Recovery

2,4,5,6-Tetrachioro-m-xylene 69 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C

COMMENTS: Results are expressed on a dry weight basis

Authorized signature Mullill Analytics Report 63965 page 0095 of 114

Quantitation Report (Not Reviewed)

C:\MSDCHEM\1\DATA\060409-L\

: L19354.D : Signal #1: ECD1A.ch Signal #2: ECD2B.ch : 4 Jun 09 10:41 am

Data Path Data File Signal(s) Acq On Operator

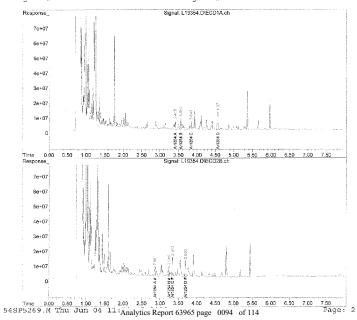
. : 63965-25 Sample Misc

: SOIL : 44 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 11:59:44 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Update: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: L

SDG: 63965

GC Column #1: STX-CLPesticides I

Sample: 63965-26

Column ID: 0.25 mm

Data File: L19355.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

COMPOUND

PCB 1254

Column #1 Column #2 SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Quantitation Report (Not Reviewed) Data Path : C:\MSDCHEM\1\DATA\06C409-I\
Data File : L19355.D
Signal(8) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 4 Jun 09 10:51 am Operator 63965-26 Sample Misc : SOIL ALS Vial : 45 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 04 12:00:24 2009
Quant Method: C:\msdchem\1\METHODS\54SP5269.M
Quant Title:
QLast Dpdate: Wed Jun 03 14:33:06 2009
Response via: Initial Calibration
Integrator: ChemStation Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Signal: L19355.D\ECD1A.ch

Time L Response 8e+07 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal: L19355.D'ECD2B.ch 7e+07 5e+57 56407 4e+07 Time 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 6.00 5.50 6.00 6.50 7.00 7.55 54S25269.M Thu Jun 04 12:Analytics Report 63965 page 0.097 of 114 Page: 2

> Ouantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\060209-L\
Data File : L19285.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch

Signat(s): Signat HI: Bellacin Signa Acq On : 2 Jun 09 5:09 pm Operator : Sample : 63965-27 Misc : ALS Vial : 56 Sample Multiplier: 1

Volume Inj. : 3 ul Signal #1 Phase : DB-1701 Widebore Signal #2 Phase: DB-5 Widebore Signal #1 Info : 0.53 mm , 1.0um f Signal #2 Info : 0.53 mm, 1.5um film

Signal: L19285.DtECD1A.ch Response 6e+07 3e+07 2e+07 0.50 1.00 1.50 2.00 2.50 30 50 1.00 1.50 2.00 2.50 30 61 0.00 1.50 50 61 0.00 Time Response 4e+07 3e+07 2e+07 PB05269.M Wed Jun 03 07: Analytics Report 63965 page 0099 of 114 Page: 2 analytics / weekerte

195 Commerce Way Portsmouth, New Hompehire 005 603-426-5111 Fox 603-420-2151

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: EB-01

June 4, 2009 SAMPLE DATA

Lab Sample ID: 63965-27 Matrix: Aqueous Percent Solid: N/A Dilution Factor: 1.0 Collection Date: 06/01/09 Lab Receipt Date: 06/01/09 Extraction Date: 06/02/09 Analysis Date: 06/02/09

	PCB ANALYTICAL RESUL	rs
COMPOUND	Quantitation Limit µg/L	Results µg/1.
PCB-1016	0.2	ti
PCB-1221	0.2	U
PCB-1232	0.2	ti
PCB-1242	0.2	ti
PCB-1248	0.2	Ŭ
PCB-1254	0.2	U
PCB-1260	0.2	U
#44075 4000		
	Surrogate Standard Recovery	
	2,4,5,6-Tetrachloro-m-xylene 88 Decachlorobiphenyl 60	96 %
U=Undetected	J=Estimated E=Exceeds Calibration Range	B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS

Analytics Report 63965 page 0098 of 114

analytics - settled

PCB QC FORMS

Analytics/ J.C: AEL Documents LLC: Pkg Dividers: PCBQC.doc

# PCB AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: L GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 63965

		Colum	n#1		1	Colum	n #2	
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	tj	SMC 2 (%)	Ħ
B06029PW	79		66	1	78		67	
L06029PWB	78		55		77		56	
LD06029PWB	82		66		-80		67	
63965-27	88		60		87	<del> </del>	61	_
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	Lower 1.	Upper
	Limit	Limit
SMC #1 = TCX	46	122
SMC #2 = DCB	40	135

- Column to be used to flag recovery values outside of QC limits
   Values outside QC limits
   System Monitoring Compound diluted out

Analytics Report 63965 page 0101 of 114

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: L GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 63965

	Column #1		Column #2					
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	Ħ	SMC 2 (%)	#
B06019PSOX,RR,,A/C	93		82		98		81	
63965-5	75		73		87		69	
63965-13	78		72		75		68	
63965-15	70		71		75		69	
63965-11	65		71		68		67	
63965-2,1:20	D		D		D		D	
63965-8	70		64		73		59	
63965-19,1:10	70	1	125		71		63	
63965+12.,A/C	58	1	55		61		54	
63965-6,1:2A/C	52	1	80		59		46	
63965-10.1:2,,A/C	42		72		41		44	
							i I	

Upper Limit 130 Lower Limit 40 40 SMC #1 = TCX SMC #2 = DCB 130

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D System Monitoring Compound diluted out

## Analytics Report 63965 page 0103 of 114

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: L GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 63965

	Column #1		Column #2					
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC I (%)	#	SMC 2 (%)	#
B06019PSOX,,A/C	95		83		96		82	
L06019PSOX,,A/C	91		84		96		82	
LD06019PSOX,,A/C	91		86		98		84	
63965-3	83		75		71	-	69	
63965-14	65		73		70		70	
63965-9	75		73		85		58	
63965-17	73		67		70		62	
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	Lower	Upper
	Limit	Limit
MC#I = TCX	40	130
MC VI - DCD	40	120

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D. System Monitoring Compound diluted out

Analytics Report 63965 page 0102 of 114

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: L GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 63965

			Column #2						
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	#	SMC 2 (%)	#	
B06029PSOX,,A/C	92		83		89	1	77		
L06029PSOX,,A/C	89		79		91		77		
LD06029PSOX,,A/C	88		81		94	· · · · · ·	78		
63965-22, A/C	57		68		55		64		
63965-25	65		50		62		49		
63965-26	69		57		70		57		
63965-4,RX	70		61		68		58		
63965-23	74		64		77		58		
63965-24,1:5	56		52		49		44		
63965-1,1:10	86		70		67		48		
63965-20,,A/C	63		67		69		51	_	
63965-21,,A/C	53		53		57		49		
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Lower Limit 40 40 Upper Limit 130 130 SMC #1 = TCX SMC #2 = DCB

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D. System Monitoring Compound diluted out

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: 1. GC Column #1: STX-CLPesticides I Column ID: 9.25 mm GC Column #2: STX-CLPesticides II Column ID: 9.25 mm

SDG: 63965

		Colum				Colum	n #2	
SAMPLE ID	SMC 1 (%)	A	SMC 2 (%)	#	SMC 1 (%)	ť	SMC 2 (%)	4
B06039PAS,RR,,A/C	99		77		93	T	77	
63965-16	56		64		91		46	
63965-1,MS,1:10	59		104		38	*	44	
63965-1,MSD,1:10	55		84		23	-	40	
63965-18, 1:5	87		81		85		61	
63965-7, 1:2	102		79		100		74	
								_
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····								
	L							

Lower Limit 40 40 Upper Limit 130 130 SMC #1 = TCX SMC #2 = DCB

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D. System Monitoring Compound diluted out

Analytics Report 63965 page 0105 of 114

PCB SOIL LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

Instrument ID: L GC Column #1: STX-CLPesticides 1 Column ID: 0.25 men GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

soc. 63965 Nor-spiked sample B0501995OX, A/C Spike: L06919PSOX\_A/C Spike duplicate: LD06019PSCX\_A/C

	LĆS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DU			
COMPOUND	ADDED (ug/kg)	ADDED (og/kg)	имп	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC	ž	RESULT (ug/kg)	56 REC		arp	н
PCB 1016	200	203	65	140	30		262	101	L	199	99	Ш	1.4	L
PCB 1260	200	200	60	130	30	9	269	100		203	102	П	1.3	Γ
PCB 1016 #2	200	300	65	(40	30	0	276	138		246	123	П	1:.8	
PCB 1260 ±2	200	200	60	130	30	0	192	96		195	97	П	1.7	Γ

# Column to be used to flag recovery and RPD values outside of QC limits

Values outside QC limits

LCS/LCSD spike added values have been weight adjusted. Non-spike result of "0" used in place of "U" to allow calculation of spike recovery,

PCB AQUECUS
LABORATORY CONTROL DUPLICATE
PERCENT RECOVERY

Instrument ID: L GC Column #1: STX-CLPosticides I Column (D: 0.25 mm

506: 63965 Nan-spiked sample: H06025PW Spike: 1.06029PWB Spike duplicate: LD06929PWB

GC Column #2: STX-CLPestivides II Column ID: 0.25 mm

LCS SPEKE	LÇSD SPIKE	LOWER	UPPER	KPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DOP	SPIKE DUF			İ
ADDED (up/L)	ADDED (ug/L)	LIMIT	LIMIT	UMIT	RESULT (ug/L)	RESULT (uz/L)	% REC	ż	RESULT (cg4.)	% REC	ø	RED	1
2.0	2.0	79	113	25	0.00	3 82	91		1,87	94		2.6	
2.0	2.0	58	115	25	0.00	1.81	90		1,88	94	П	3.9	٦
2.0	2.0	81	112	25	0.00	1.73	87	Γ	1.77	89	П	2.4	٦
2.0	2.0	54	123	25	3.00	1.80	90		1.86	79	П	3.4	٦
	2.0 2.0 2.0 2.0	ADDED (ug/L) ADDED (ug/L) 2.0 2.6 2.9 2.6 2.0 2.0	ADDED (ug/L) ADDED (ug/L) LEAST 2.0 2.0 79 2.0 2.0 58 2.0 2.0 3i	ADDED (ug/L) ADDED (ug/L) LEATT LIMIT  2.0 2.6 75 113  2.0 2.6 58 115  2.0 2.6 81 112	ADDED (ug/L) ADDED (ug/L) LMAT LIMIT UMIT 20 2c 79 113 25 20 2c 58 115 25 20 2.0 81 112 25	ADDED(ug/L) ADDED(ug/L) LIMIT LIMIT LIMIT RESULT(ug/L)  20 2.6 79 113 25 0.00  2.0 2.0 58 115 25 0.00  2.0 2.0 81 112 25 0.00	ADOMD (sgrt.) ADDMD (sgrt.) LAST   LINT   LINT   LINT   RESULT (sgrt.)   SESULT (sgrt.)   2.0	ADGND (sg/1) ADGND (sg/2) LEAT LIGHT (AMT RESULT (sg/2) ASSULT (sg/2) 4 REC  20 2c 72 173 25 0.00 182 91  2.0 2.0 81 182 55 0.00 183 69  2.0 2.0 81 112 25 0.00 173 87	ADDRD (sight) ADDRD (sight) LAST UNIT LOST RESULT (sight) SESSLIT (sight) SESS	ADDAD	AD080   Lyu   AD080   Lyu   Lyu   Lyu   Lyu   R583   Lyu   Lyu	ADDAD (sg/1) ADDAD (sg/1) LEAT LIGHT LIGHT (LATT RESULT (sg/1) RESULT (sg/1) W REC 9 RESULT (sg/1) Sale 20 20 20 70 113 25 1.00 182 VI 1877 44 1 26 20 2.0 2.0 81 15 25 0.00 183 50 183 64 1 20 2.0 2.0 81 112 25 0.00 1.75 87 1.77 19	ADDAD (sg/1) ADDAD (sg/1) LIMIT LIMIT LIMIT (LIMIT RESULT (sg/1) RESULT

4 Column to be used to flag recovery and RPD values outside of QC limits

LCS/LCSD apike added values have been volume adjusted. Non-spike result of '0" used in place of "U" to allow calculation of spike recovery.

PCB FORM 3

Analytics Report 63965 page 0106 of 114

PCR SO:L LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

bracument ID: L GC Column #1: STX-CLPosticides i Column ID: 0.25 mm GC Column #2: STX-CLPesticides II

SDG: 63965 ked sample: B06029PSOX ,A/C Spike: L05029PSOX,,A/C Spike duplicate: LID96029PSOX,,, $\lambda / C$ 

Colume ID: 0.25 mm

LCS SPIKE	LOSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DUP			
ADDED (1g/kg)	ADDED (trg/kg)	EUNOT	LIMIT	LIMIT	RESULT (ng/kg)	RESULT (ug/kg)	% REC	ý	RESULT (ug/kg)	% REC	×	KPD	á
269	200	65	140	36	c	186	93		188	94	L	1.3	Ш
200	200	60	130	30	e	188	94		193	95	Γ	2.5	П
200	20g	65	100	50	ŧı	203	102		225	113		10.5	П
280	21'0	60	130	30	G G	181	36		179	89		1.0	П
	ADDED (19/Ag) 260 200 200	ADDED (19/4g) ADDED (19/4g) 260 200 200 200 200 260	ADDED (19/kg)   ADDED (19/kg)   EISOT	ADDED Lapkg  ADDED ling fig  LIMIT   LIMIT	ADDED Lip/Ag2	ΔΟΣΤΟ (μγλε)         ΔΟΘΕΟ (μγλε)         LMOT         UAMT         1,304T         RESULT (sq.kg)           χΌ         200         65         140         56         C           χΌ         260         60         130         30         0           320         270         65         140         30         0	ADDICO Lip & C.   ADDICO Lip & DADT   LIMIT   LIMIT   BESULT (e.g. & 275 CLT rep & 2	ADDED Lips & ADDED Ing & ILBOT   LBOT   LBOT   LBOT   CBOT   Gets   2655(LT (sight)   2655(LT (sigh)	ADDITIO Lipsky   ADDITIO Lipsky   Library   Library	ADDED Captic   ADDED Captic   LINET   LINET   LINET   RESULT (e.g.ta)   275 CALT (e.	ADDITIO Lipsky   LIMIT   LIM	ADDICO Lips &   ADDICO Lips &   LIDOT   LINDT   LIDOT   RESULT (e.g. &   275 U.T. (e.g. &   3)   275 U.T. (e.g. &   3)   158   94   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150   150	ADDICO Lips &   ADDICO Lips &   LIMIT   LIMIT   BESULT (each   RESULT (each   R

# Column to be used to flag recovery and RPD values outside of QC limits

LCS4.CSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery

FCB FORM 3

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PCB SOIL
MATRIX SP:KE/DUPLICATE
DEPCEMT RECOVERY

Instrument ID: L

GC Column #1: STX-CL/Pesticules I Column ID: 0.25 mm GC Column #2: STX-Cl/Pesticules :1 Column ID: 9.25 mm SDG. 63965 Non-soikest scenate: 63965-1.11E

Non-spikest sample: 63965-1,1:10 Spike: 63965-1,MS,1:10 Spike displicate: 63965-1,MSD,1:10

	MS SPIKE	MSD SPIKE	LOWER	UPPER	RPD	NON-SPINA	SPIKE	SPEER		SPIKE DUP	SPTKE DU	P	
COMPGUND	ADDED (apkg)	ADDED (ngAg)	LIMIT	LIMIT	TIMIT	RESULT (up/kg)	RESULT (ug/kg)	% R.SC	ė	RESULT (up/kg)	% REC	r	KPD
PCB ID16	208	206	63	140	30	0	662	318		511	249		25,é
PCB 1260	208	206	50	130	30	a	857	412		577	329	1	23.5
PCB 1016 #2	208	205	65	146	30	9 .	180	87		:39	67		26.3
PCB 1260 #2	298	205	60	130	39	9	454	218		379	184	٦.	17.9

 $\tilde{\tau}$  Column to be used to flag recovery and RFD values outside of QC limits

\* Values outside QC limits

MS/MSD spike added values have been weight adjusted

Non-spike result of "0" used in place of "U" to allow calculation of spike recover

Constructs:

PC3 FORM 3

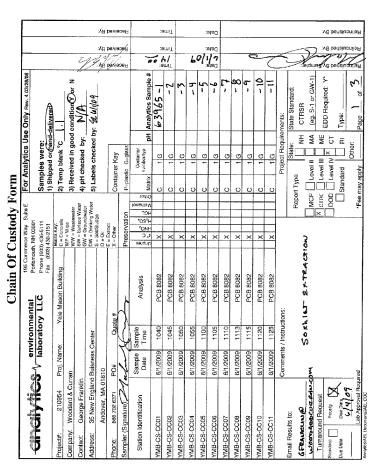
Analytics Report 63965 page 0109 of 114

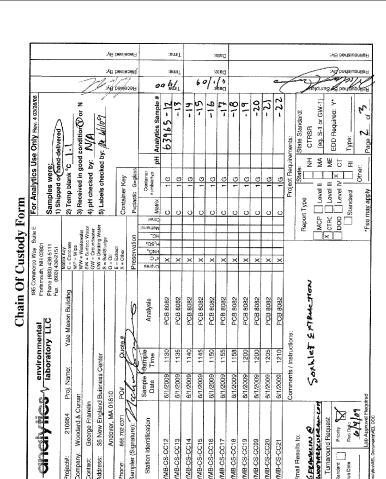
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Analytics Report 63965 page 0110 of 114





Analytics Report 63965 page 0111 of 114

Analytics Report 63965 page 0112 of 114

				2	1/9	*/	:AB		) ) 909H	<del> </del>		miT amiT		64		ated ated		0	Helmonished By Sample By.
	For Analytics Use Only Rev. 4 03/28/08 Samples were:	1) Shipped or hand-delivered	nk c [.]	3) Received in good condition (V) or N	4) PH Checked by: MF 6/1/09	5) Labels checked by: // triffed		[ <u>_</u>	glass	hyp pH Analytics Sample #	63965 - 23		3 -25		c 6.0 -27				Project Requirements:   Project Requirements:   State Stat
orm	For Analytics L Samples were:	1) Shipped o	2) Temp blank °C	3) Received	4) pH check	5) Labels ch		Container Key	P=plastic G=glass	Container numbertyp	0 10	0	C 1G	2	×				Type   Le
Chain Of Custody Form	195 Commerce Way Suite E Portsmouth, NH 03801 Phone (603) 436-5111	Fax (603) 430-2151	G = Concrete	WP = Wipe WW = Washwater	SW = Surface Water	ster Vater	Biccilic/line o	X = Other - DI WATER	Preservation	Unpres 4° C Huo, Hou Hou Hou Hou Hou Hou Hou Hou	×	×	×	×	×				
Chain Of	ital LLC	Fax (	Yale Mason Building					**	2	Analysis	PCB 8082	PCB 8082	PCB 8082	PCB 8082	PCB 8082				ions: Extenction For PCBBB2 (EB-ci) For Sidnal chlorine with we 6/1/09
	environmental					Center		Quote	J.	Sample	1215	1220	1225	1230	1245				Comments / Instructions:  Sork let Ex  Amber 1: Her fo  15: Ald neg. For neg  KI perper. MF
	9 e		Proj. Name:	an		Buisness	810	#Od	ha	Sample	6/1/2009	6/1/2009	6/1/2009	6/1/2009	6/1/2009				Commercial Solution of the State of the Stat
			t: 210954	ny: Woodard & Curran	George Franklin	35 New England Buisness Center	Andover, MA 01810	866 702 6371	Sampler (Signature): Mrd	Station Identification	YMB-CS-CC22	YMB-CS-CC23	YMB-CS-CC24	YMB-CS-CC25					Trail Results to:  6. Flank Live & C. Flank Live & C. Flank Live & Turnaround Request Sundari   Partin   Denty   Control   Denty   Control
	5		Project#:	Company.	Contact	Address:		Phone:	Sample	Static	YMB-C5	YMB-CE	YMB-C	YMB-C	EB-01				C FCA Tuma Tuma Tuma Tuma Tuma Tuma Tuma Tuma

Analytics Report 63965 page 0113 of 114

## ANALYTICS SAMPLE RECEIPT CHECKLIST

ANALYTICS SAMPLE RE	CEIPT CHECKLIST
AELLABA: 63965 CLIENT: Wached + Cureun Andrer PROJECT: Yale Mason Building	COOLER NUMBER:  NUMBER OF COOLERS:  DATE RECEIVED: 6/1/09
A: PRELIMINARY EXAMINATION:  1. Cooler received by(initials)  2. Circle one:  3. Did cooler come with a shipping slip?  3a. Enter carrier name and airbill number here:  4. Were custody seals on the outside of cooler?  How many & where:  5. Did the custody seals arrive unbroker and intact upon arrival?	Date Received: Shipped  Y  Seal Name:  Seal Name:
6. COC#:  7. Were Custody papers filled out properly (ink.signed, etc)?  8. Were custody papers scaled in a plastic bag?  9. Did you sign the COC in the appropriate place?  10. Was the project identifiable from the COC papers?  11. Was enough ice used to chill the cooler?  V N	W N W N W N Temp. of cooler:
B. Log-In: Date samples were logged in:  12. Type of packing in cooler bubble wrat proposm)  13. Were all bottles sealed in separate plastic bags?  14. Did all bottles arrive unbroken and were labels in good condition?  15. Were all bottle labels complete(ID.Date,time,etc.)  16. Did all bottle labels agree with custody papers?  17. Were the correct containers used for the tests indicated:  18. Were sumples received at the correct pit?  19. Was sufficient amount of sample sent for the tests indicated?  20. Were bubbles absent in VOA samples?	By MF  N  N  N  N  N  N  N  N  N  N  N  N  N
IF NO, List sample #s  21. Laboratory labeling verified by (initials): Sec  * 63965-13-A was labeled *s  time that mattch #6MB - C  CAMLYTICS CLICAGE DOCUMENTS VIORUS STORE COMMENT OF THE MAN Analytics Report 63965 p  TRANSIL FORMS CALLED THE COMMENT OF THE MAN ANALYTICS CLICAGE DOCUMENTS VIORUS STORE COMMENT OF THE COM	YMB-CS-CC14" but had the date and S-CC13" on the chain. See 1,3900 age 0114 of 114 ple as ymb-cs-cc13 asper

195 Commerce Way Suite E Portsmouth, New Hampshire 03601 603-436-6111 Fax 603-430-2151 800-929-9906 www.ana:vlieslab.com

June 16, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

RE:

Analytical Results Case Narrative Analytics # 64062 Yale Mason Bldg.

Dear Mr. Franklin:

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

Case Narrative/Non-Conformance Summary Case Narrative/Non-Conformance Summary Sample Log Sheet - Cover Page CT Certification Page CTB Form 1 Data Sheet for Samples and Blanks Chromategrams PCB Form 10 Confirmation Results PCB Form 3 MS/MSD (LCS) Recoveries Chain of Custody (COC) Forms

AnalyticsLLC:A\_Narratives:WCI:Yale64062.doc

Analytics Report 64062 page 0001 of 47



195 Commerce Way Suite E Parismouth, New Hampenire 338 603-436-5111 Faix 603-430-2151 800-929-9906 www.analyticslab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 64062

Revision: Rev. 0

Re: Yale Mason Building

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 11 June 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab_Number	Sample Date	Station Location	Analysis	Comments
64062-1	06/10/09	YMB-CS-CC01A	EPA 8082 (PCBs only)	
64062-2	06/10/09	YMB-CS-CC02A	EPA 8082 (PCBs only)	
64062-3	06/10/09	YMB-CS-CC03A	EPA 8082 (PCRs only)	
64062-4	06/10/09	YMB-CS-CC01B	EPA 8082 (PCBs only)	
64062-5	06/10/09	YMB-CS-CC02B	EPA 8082 (PCBs only)	
64062-6	06/10/09	YMB-CS-CC01C	EPA 8082 (PCBs only)	
64062-7	06/10/09	YMB-CS-CC99	EPA 8082 (PCBs only)	
64062-8	06/10/09	YMB-CS-CC02C	EPA 8082 (PCBs only)	
64062-9	06/10/09	EB-01	EPA 8082 (PCBs only)	

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Sophen L. Knollmeyer Lab. Director

Date

This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions

PCBs by EPA Method 8082: Samples 64062-7, 64062-7, 64062-7 and 64062-8 required dilution due to matrix affect or PCB concentrations in the sample.

Sincerely, ANALYTICS Environmental Laboratory, LLC

St. Clin

AnalyticsLLC:A\_Narratives:WCt:Yale64062.doc

Analytics Report 64062 page 0002 of 47

CITALYTICS V environmental. Indication like the control of the con

## Laboratory Analysis QA/QC Certification Form

Laboratory Name: Analytics Environmental Laboratory, LLC

Client: Woodard & Curran

Project Location: Yale Mason Building

Sampling Date(s): 06/10/2009 Laboratory Sample ID(s): 64062-1 through 64062-9 Project Number: 64062

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed (including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CT DEP method-specific Reasonable Confidence Protocol documents)?	⊠ Yes	□No
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody documents(s)?	⊠ Yes	□ No
3	Were samples received at an appropriate temperature $(4^{\circ} C \pm 2^{\circ})$ ? If no, the attached narrative should include any explanation as the acceptability of samples received at other temperatures.	⊠ Yes	□ No
4	Were all QA/QC performance criteria specified in the CT DEP Reasonable Confidence Protocol documents achieved?	⊠ Yes	[ No
5	Were reporting limits specified on the chain-of-custody met?	⊠ Yes	□ No
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documantes?	⊠ Yes	□ No
7	Are project-specific QC samples included in this data set?	□ Yes	⊠ No

For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1 is "No", the data package does not meet the requirements for 'Reasonable Confidence." Note:

I, the undersigned, attest under the pains and penalties of perjury tha	it, to the best of my knowledge and belief an
based upon my personal inquiry of those responsible for providing the	e information contained in this analytical
report, such information is accurate and complete	

Position: Laboratory Director

Printed Name: Stephen Knollmeyer

June 16, 2009

## Surrogate Compound Limits

	atrix: Aqueous Jnits: % Recovery	Solid % Recovery	Method
Volatile Organic Compounds - Drinki	ing Water		
1,4-Difluorobenzene	70-130		EPA 524.2
Bromofluorobenzene	70-130		
1,2-Dichlorobenzene-d4	70-130		
Volatile Organic Compounds			
1,2-Dichloroethane-d4	70-120	70-120	EPA 624/8260B
Toluene-d8	85-120	85-120	
Bromofluorobenzene	75-120	75-120	
Semi-Volatile Organic Compounds			
2-Fluorophenol	20-110	35-105	EPA 625/8270C
d5-Phenol	15-110	40-100	
d5-nitrobenzene	40-110	35-100	
2-Fluorobiphenyl	50-110	45-105	
2,4,6-Tribromophenol	40-110	40-125	
d14-p-terphenyl	50-130	30-125	
PAH's by SIM			
d5-nitrobenzene	21-110	35-110	EPA 8270C
2-Fluorobiphenyl	36-121	45-105	
d14-p-terphenyl	33-141	30-125	
Pesticides and PCBs			
2,4,5,6-Tetrachloro-m-xylene (TCX)	46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)	40-135	40-130	
Herbicides			
Dichloreacetic acid (DCAA0	30-150	30-150	
Gasoline Range Organics/TPH Gasoli	ne		
Trifluorotoluene TFT (FID)	60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)	60-140	60-140	
Trifluorotoluene TFT (PID)	60-140	60-140	
Bromofluorobenzene (BFB) (PID)	60-140	60-140	
Diesel Range Organics/TPH Diesel			
m-terphenyl	60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH

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Rev. 1

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PCB DATA SUMMARIES

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195 Commerce Way Portsmouth, New Hampshire 03801 603-436-5111 Fax 503-430-2151 800 910 900\*

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: Lab QC

June 12, 2009

06/12/09

Lab Sample ID: B06119PSOX Matrix: Soil Percent Solid: N/A Dilution Factor: 1.0 Collection Date: Lab Receipt Date: Extraction Date:

Analysis Date:

COMPOUND	Quantitation Limit µg/kg	Quantitation Results Limit µg/kg µg/kg	
PCB-1016	33	Ü	
PCB-1221	33	υ	
PCB-1232	33	U	
PCB-1242	33	U	
PCB-1248	33	U	
PCB-1254	33	U	
PCB-1260	33	U	
· · · · · · · · · · · · · · · · · · ·			
	Surrogate Standard Recovery		
	2,4,5,6-Tetrachioro-m-xylene 94	%	
	Decachlorobiphenyl 75	%	

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCB Report

Authorized signature Melbell

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Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\l\DATA\061209-M\
Data File : M16996B.D
Signal(s) : Signal #1: ECD1A.ch Signal
Acq On : 12 Jun 2009 10:33 am
Operator : ML6996B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 12 Jun 2009 10:33 am

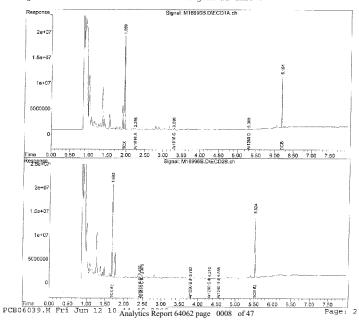
B06119PSOX,,A/C

Sample Misc

Misc : SOIL
ALS Vial : 53 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 12 10:44:45 2009
Cuant Method: C:\msdchem\1\METHODS\PCB06039.M
Quant Title : Aroclor 1016/1260
QLast Update : Fri Jun 12 09:57:25 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Field Sample ID: Lab OC

Project Name: Yale Mason Building Project Number: 210954

June 15, 2009 SAMPLE DATA

Lab Sample ID: B06109PAS RR Percent Solid: N/A Dilution Factor: Collection Date: Lab Receipt Date: Extraction Date: 06/10/09

06/15/09

Analysis Date:

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results μg/kg	
PCB-1016	33	τ	
PCB-1221	33	U	
PCB-1232	33	U	
PCB-1242	33	U	
PCB-1248	33	υ	
PCB-1254	33	U	
PCB-1260	33	U	

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 62 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

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Analytics Report 64062 page 0009 of 47

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Portamoulis, New Humpshire 03801 603-436-6131 Fex 603-430-2161

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building

Project Number: 210954

Field Sample ID: Lab QC

ime 16, 2009 SAMPLE DATA

Lab Sample ID: B06159PW Matrix: Aqueous Percent Solid: N/A Dilution Factor: 1.0 Collection Date:

Extraction Date: 06/15/09

Analysis Date:

Lab Receipt Date:

1	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/L	Results μg/L	
PCB-1016	0.2	Ū	
PCB-1221	0.2	U	
PCB-1232	0.2	U	
PCB-1242	0.2	U	
PCB-1248	0.2	U	
PCB-1254	0.2	U	
PCB-1260	0.2	U	

Surrogate Standard Recovery

U=Undetected I=Estimated E=Exceeds Calibration Range B=Detected in

2,4,5,6-Tetrachloro-m-xylene

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS

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Quantitation Report (Not Reviewed)

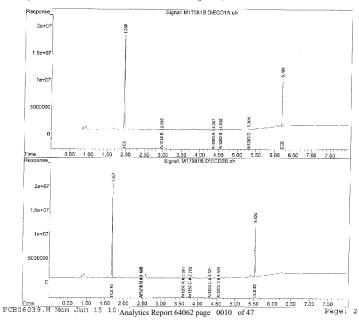
Data Path : Data File : Signal(s) : C:\msdchem\1\DATA\061509-M\ M170818.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 15 Jun 2009 9:21 am

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 15 10:26:32 2009
Quant Method: C:\msdchem\l\METHODS\PCB06039.M
Quant Title: Aroclor 1016/1260
QLast Update: Fri Jun 12 09:57:25 2009
Response via: Initial Calibration
Integrator: ChemStation

Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\061509-M\Data File : M17094B.D

Mi/0948.9 Signal #1: ECD1A.ch Signal #2: ECD2B.ch 15 Jun 2009 4:29 pm

Signal(s) : Acq On : Operator :

B06159PW Sample Misc

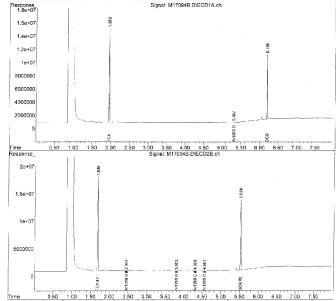
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: events.e

Integration File Signal 1: events.e
Integration File Signal 2: events2.e
Quant Time: Jun 16 06:40:41 2009
Quant Method: C:\msdchem\l\mathrm{IMEHODS\PCB06039.M}
Quant Title: Aroclor 1016/1260
QLast Update: Fri Jun 12 09:57:25 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



PCB06039 M Tue Jun 16 06 Analytics Report 64062 page 0012 of 47 Page: 2

195 Commerce Way Fortsmouth, New Hampshire 03801 603-436-5111 Fax 603-430-2191

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC01A

June 12, 2009 SAMPLE DATA

Lab Sample ID: 64062-1 Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 06/10/09 Lab Receipt Date: 06/11/09 Extraction Date: 06/11/09 Analysis Date: 06/12/09

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results μg/kg	
PCB-1016	33	υ	
PCB-1221	33	U	
PCB-1232	33	U	
PCB-1242	33	υ	
PCB-1248	33	U	
PCB-1254	33	U	
PCB-1260	33	U	

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 60 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

PCS Report

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Analytics Report 64062 page 0013 of 47

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC02A

June 15, 2009 SAMPLE DATA

Lab Sample ID: 64062-2 Matrix: Solid Percent Solid: Dilution Factor: 204 Collection Date: 06/10/09 Lab Receipt Date: Extraction Date: 06/11/09 06/11/09 Analysis Date: 06/12/09

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results <i>µg/</i> kg
PCB-1016	6730	U
PCB-1221	6730	U
PCB-1232	6730	U
PCB-1242	6730	U
PCB-1248	6730	n
PCB-1254	6730	160000
PCB-1260	6730	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene

Decachlorobipheny!

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis. \* The surrogates were diluted out.

PCB Report

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Analytics Report 64062 page 0015 of 47

Quantitation Report (QT Reviewed)

C:\msdchem\1\DATA\061209-M\ M16999.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 12 Jun 2009 11:09 am

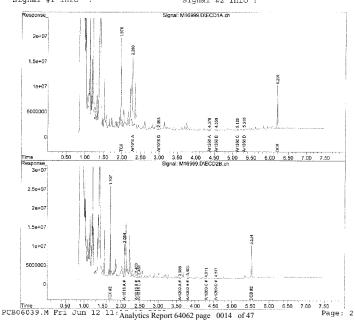
Data Path Data File Signal(s) Acq On Operator Sample 64062-1

Misc : SOIL ALS Vial : 56 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 12 11:19:32 2009
Quant Method: C:\msdchem\f\(1\)\METHODS\PCB06039.M
Quant Title: Arcclor 1016/1260
QLast Update: Fri Jun 12 09:57:25 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64062

GC Column #1: STX-CLPesticides I

Sample: 64062-2, 1:200.,A/C

Column ID: 0.25 mm

Data File: M17011.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 203.6

Column ID: 0.25 mm

COMPOUND

PCB 1254

Column #1 Column #2 SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD 159718 128786

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

Comments:

PCB FORM 10

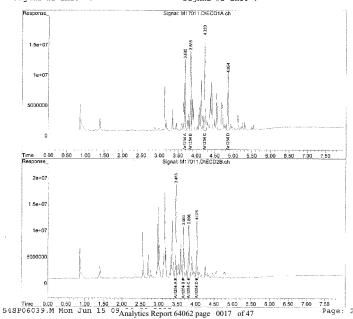
Analytics Report 64062 page 0016 of 47

Quantitation Report (OT Reviewed) Data Path C:\msdchem\1\DATA\061209-M\ Data File Signal(s) Acq On Operator Sample M17011.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 12 Jun 2009 2:04 pm 64062-2, 1:200,,A/C Misc : SOIL : 4 Sample Multiplier: 1

ALS Vial Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 15 09:36:49 2009
Quant Method: C:\msdchem\1\METHODS\54SP06039.M
Quant Title:
QLast Update: Thu Jun 04 13:12:09 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

COMPOUND

SDG: 64062

GC Column #1: STX-CLPesticides I

Sample: 64062-3..A/C

Column ID: 0.25 mm

Data File: M17004.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

Column #1 Column #2 SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

analytics /

Yale Mason Building

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Number: 210954 Field Sample ID: YMB-CS-CC03A June 12, 2009 SAMPLE DATA

Lab Sample ID: 64062-3 Matrix: Percent Solid: 96 Dilution Factor: Collection Date: 06/10/09 Lab Receipt Date: 06/11/09 Extraction Date: 06/11/09 Analysis Date:

	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit μg/kg	Results μg/kg
PCB-1016	33	υ
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	υ
PCB-1254	33	119
PCB-1260	33	υ
	Surrogate Standard Recovery	
	2,4,5,6-Tetrachloro-m-xylene 74 % Decachlorobiphenyl 54 %	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. Results are expressed on a dry weight basis.

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Analytics Report 64062 page 0018 of 47

Quantitation Report (Not Reviewed)

Data Path Data File Signal(s)

C:\msdchem\1\DATA\061209-M\
M17004.D
Signal #1: ECDlA.ch Signal #2: ECD2B.ch
12 Jun 2009 11:59 am

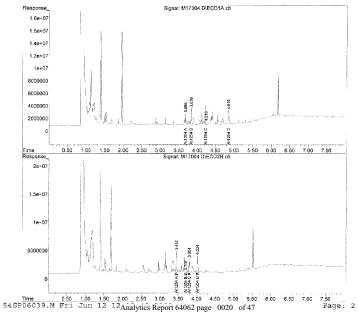
Acq On Operator Sample 64062-3,,A/C

Misc : SOIL ALS Vial : 61 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 12 12:12:48 2009
Quant Method : C:\msdchem\1\METHODS\54SP06039.M
Quant Title :
QLast Update : Thu Jun 04 13:12:09 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-CS-CC01B

June 12, 2009 SAMPLE DATA

Lab Sample ID: 64062-4 Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 06/10/09 Lab Receipt Date: 06/11/09 Extraction Date: 06/11/09 Analysis Date: 06/12/09

	PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results μg/kg	
PCB-1016	33	U	
PCB-1221	33	U	
PCB-1232	33	υ	
PCB-1242	33	U	
PCB-1248	33	U	
PCB-1254	33	112	
PCB-1260	33	Ū	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

2,4,5,6-Tetrachloro-m-xylene Decachlorobiphenyl

COMMENTS: Results are expressed on a dry weight basis.

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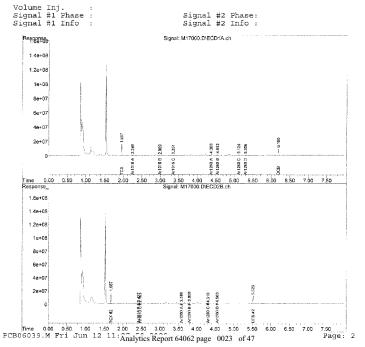
Analytics Report 64062 page 0021 of 47

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\061209-M\
Data File : M17000.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Jun 2009 11:19 am

ACQ OI : 2 CAM 200 - 2 CAM 200

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 12 11:27:50 2009
Quant Method: C:\madchem!\(METHODS\PCB06039.M\)
Quant Title : Aroclor 1016/1260
QLast Update: Fri Jun 12 09:57:25 2009
Response via : Initial Calibration
Integrator: ChemStation



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

SDG: 64062

GC Column #1: STX-CLPesticides I

GC Column #2: STX-CLPesticides II

Sample: 64062-4,,A/C

Column ID: 0.25 mm

Data File: M17000 D

Column ID: 0.25 mm

Dilution Factor: 1.0

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	100	112	10.7	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

### PCR FORM 10

Analytics Report 64062 page 0022 of 47

analytics /-

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA. 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC02B

Lab Sample ID: 64062-5 Matrix: Solid Percent Solid: Dilution Factor: Collection Date: 06/10/09 06/11/09 06/11/09 Lab Receipt Date: Extraction Date:

06/12/09

Analysis Date:

June 15, 2009 SAMPLE DATA

PCB ANALYTICAL RESULTS		
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	360	U
PCB-1221	360	U
PCB-1232	360	Ü
PCB-1242	360	U
PCB-1248	360	U
PCB-1254	360	7260
PCB-1260	360	U
	Surrogate Standard Recovery	

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight hasis

PCB Seport

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Analytics Report 64062 page 0024 of 47

# PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64062

GC Column #1: STX-CLPesticides I

GC Column #2: STX-CLPesticides II

Sample: 64062-5, 1:10,,A/C

Column ID: 0.25 mm

Data File: M17009.D

Dilution Factor: 10.5

Column ID: 0.25 mm

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	6569	7262	10.0	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 64062 page 0025 of 47

analytics / white

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC01C

hoe 15, 2009 SAMPLE DATA

Lab Sample ID: 64062-6 Matrix: Percent Solid: Solid Dilution Factor: Collection Date: 102 06/10/09 06/11/09 06/11/09 Lab Receipt Date: Extraction Date: Analysis Date: 06/12/09

PCB ANALYTICAL RESULTS Quantitation Limit µg/kg COMPOUND PCB-1016 3370 3370 PCB-1221 PCB-1232 3370 PCB-1242 3370 3370 U PCB-1248 PCB-1254 3370 72100 PCB-1260

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene

Decachlorobiphenyl

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

COMMENTS: Results are expressed on a dry weight hasis.
\* The surrogates were diluted out.

FCB Report

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Analytics Report 64062 page 0027 of 47

(Not Reviewed) Quantitation Report

Data Path : Data File : Signal(s) : C:\msdchem\1\DATA\061209-M\ M17009.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 12 Jun 2009 1:44 pm

Acq On Operator Sample 1:44 pm 64062-5, 1:10,,A/C

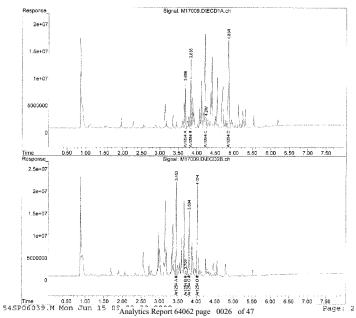
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 15 09:23:33 2009
Quant Method: C:\msdchem\1\METHODS\54SP06039.M
Quant Title:
Clast Update: Thu Jun 04 13:12:09 2009
Response via: Initial Calibration
Integrator. ChemStation

Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64062

GC Column #1: STX-CLPesticides I

Sample: 64062-6, 1:100,,A/C

Column ID: 0.25 mm

Data File: M17010.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 101.5

Column ID: 0.25 mm

	COlumn #1	Comme #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	72131	53077	30.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10

Analytics Report 64062 page 0028 of 47

Data Path Data File Signal(s) Acq On Operator Sample C:\msdchem\1\DATA\061209-M\ M17010.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 12 Jun 2009 1:54 pm 64062-6, 1:100,,A/C Misc : SOIL : 3 Sample Multiplier: 1 ALS Vial Integration File signal 1: events.e Integration File signal 2: events2.e Quant Time: Jun 15 09:34:53 2009 Quant Method: C:\msdchem\1\METHODS\54SP06039.M Quant Title: QLast Update: Thu Jun 04 13:12:09 2009 Response via: Initial Calibration Integrator: ChemStation Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Signal: M17010 DVFCC01A ch 1.8e+07 1.4e+07 1.2e+07 1e+07 acconno 6000000 4000000 2000000 Ar1254.A Ar1254.B 5.50 6.00 6.50 7.00 7.50 2e+07 500000

Quantitation Report

(OT Reviewed)

### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Time 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 54SP06039 M Mon Jun 15 0SAnalytics Report 64062 page 0029 of 47 Page: 2

Instrument ID: M

SDG: 64062

GC Column #1: STX-CLPesticides I

Sample: 64062-7,1:100,,A/C

Column ID: 0.25 mm

Data File: M17082.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 99.1

Column ID: 0.25 mm

COMPOUND

PCB 1254

Column #1 Column #2 SAMPLE RESULT (ug/kg) SAMPLE RESULT (vg/kg) RPD 64873

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside OC limits

PCB FORM 10

Analytics Report 64062 page 0031 of 47

analytics / www.

June 15, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC99

SAMPLE DATA Lab Sample ID: 64062-7 Matrix:

Percent Solid: 96 Dilution Factor: Collection Date: 06/10/09 Lab Receipt Date: 06/11/09 Extraction Date: 06/11/09 Analysis Date:

	PCB ANALYTICAL R	ESULTS	
COMPOUND	Quantitation Limit μg/kg		Results µg/kg
PCB-1016	3270		fì
PCB-1221	3270		U
PCB-1232	3270		Ü
PCB-1242	3270		U
PCB-1248	3270		U
PCB-1254	3270		86400
PCB-1260	3270		Ü
	Surrogate Standard Recove	ry	
	2,4,5,6-Tetrachloro-m-xylene	+ %	
	Decachlorobiphenyl	* %	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS:

Results are expressed on a dry weight basis.

\* The surrogates were diluted out.

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Analytics Report 64062 page 0030 of 47

Quantitation Report

Data Path : C:\msdchem\1\DATA\061509-M\
Data File : M17082.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 15 Jun 2009 9:31 am

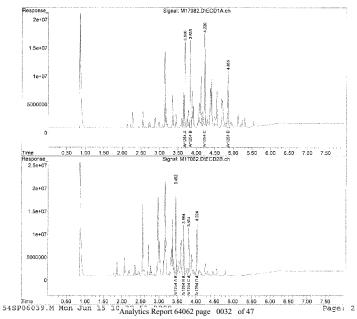
Operator

Sample : 64062-7,1:100,,A/C
Misc : SOIL
ALS Vial : 77 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 15 10:32:36 2009
Quant Method : C:\msdchem\1\METHODS\54SP06039.M
Quant Title :
QLast Update : Thu Jun 04 13:12:09 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-CS-CC02C

June 15, 2009 SAMPLE DATA

Lab Sample ID: 64062-8 Solid Matrix: Percent Solid: 96 Dilution Factor: 06/10/09 Collection Date: Lab Receipt Date: 06/11/09 Extraction Date: 06/11/09 Analysis Date: 06/12/09

	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Lemit µg/kg	Results μg/kg
PCB-1016	360	U
PCB-1221	360	U
PCB-1232	360	U
PCB-1242	360	U
PCB-1248	360	U
PCB-1254	360	5410
PCB-1260	360	U

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 102 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

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Analytics Report 64062 page 0033 of 47

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\061209-M\
Data File : M17008A.D
Signal(8) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 12 Jun 2009 1:34 pm

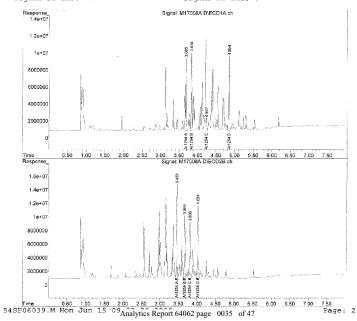
Acq On Operator

Operator : Sample : 64062-8, 1:10,,A/C Misc : SOIL ALS Vial : 1 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 15 09:23:25 2009
Quant Method: C:\msdchem\1\METHODS\54SP06039.M
Quant Title:
QLast Update: Thu Jun 04 13:12:09 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

GC Column 41: STX-CLPesticides I

Sample: 64062-8, 1:10,,A/C

Data File: M17008A D

Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

Dilution Factor: 10.5

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	4824	5406	11.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

### PCB FORM 10

Analytics Report 64062 page 0034 of 47

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195 Commerce Way Portmouth, New Hampshire 633 833-436-5111 Fax 602-430-2151

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: EB-01

lune 16, 2009 SAMPLE DATA

Lab Sample ID: 64062-9 Aqueous N/A Matrix: Percent Solid: Dilution Factor: Collection Date: 1.0 06/10/09 Lab Receipt Date: 06/11/09 06/15/09 Extraction Date: Analysis Date: 06/15/09

-	CB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/L	Results μg/L
PCB-1016	0.2	U
PCB-1221	0.2	U
PCB-1232	0.2	U
PCB-1242	0.2	U
PCB-1248	0.2	U
PCB-1254	0.2	U
PCB-1260	0.2	IJ
Su	rrogate Standard Recovery	

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

COMMENTS

PCB Report

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Analytics Report 64062 page 0036 of 47

Data Path:
Data File:
Signal(s):
Acq On:
Operator:
Sample: Misc : ALS Vial : 5 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 16 06:40:47 2009
Quant Method: C:\msdchem\1\METHODS\PCB06039.M
Quant Title: Aroclor 1016/1260
QLast Update: Fri Jun 12 09:57:25 2009
Response via: Initial Calibration
Integrator: ChemStation Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info : Signal, M17097, D\ECD1A.ch Response\_ 1.6e+07 1.4e+07 1.2e+07 1e+07 2000000 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 6.50 6.00 6.50 7.00 7.50 se... Signal M17097 DIECD2B.ch 1.5e+07

Quantitation Report

C:\msdchem\1\DATA\061509-M\ M17097.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 15 Jun 2009 4:59 pm

(Not Reviewed)

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides ( Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

5000000

SDG: 64062

6.00 6.50 7.00 7.50 Page: 2

		Colum				Colum		
SAMPLE ID	SMC 1 (%)	if	SMC 2 (%)	#	SMC 1 (%)	ij	SMC 2 (%)	#
B06119PSOX,,A/C	94		75		88		77	
L06119PSOX,,A/C	90		77		92		80	
LD06119PSOX,,A/C	96		80		95		82	
64062-1	65		60		56		51	
64062-4,,A/C	82		68		75		65	
64062-2	53		49		53		42	
64062-3,,A/C	74		54		69		47	
64062-8, 1:10,,A/C	120		95		102		. 74	
64062-5, 1:10,,A/C	118		91		97		67	
64062-6, 1:100,,A/C	D		D		D		D	
64062-2, 1:200,,A/C	D		D		D		D	
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Upper Limit 130 130 # Column to be used to flag recovery values outside of QC limits
\* Values outside QC limits
D System Monitoring Compound diluted out

SMC #1 = TCX SMC #2 = DCB

Limit 40 40

Analytics Report 64062 page 0039 of 47



## PCB QC FORMS

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:PCBQC.doc

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# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 64062

SAMPLE ID	SMC 1 (%)	Colum. #	SMC 2 (%)	#	CD 50 1 (6/2)	Colum	1 112 ((1 0 10))	
DOCCOOR A C DD 1 100		#		#	SMC 1 (%)	ħ	SMC 2 (%)	#
B06109PAS,RR,,A/C	83		62		82		63	
64062-7,1:100,,A/C	D		D		D	1	D	
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Upper Limit 130 130 Lower Limit 40 40 SMC #1 = TCX SMC #2 = DCB

# Column to be used to flag recovery values outside of QC limits

\* Values outside QC limits

D System Monitoring Compound diluted out

Analytics Report 64062 page 0040 of 47

# PCB AQUEOUS SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 64062

		Colum	n#I			Colum	n #2	
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	4	SMC 2 (%)	#
B06159PW	71		71		74		73	
L06159PWB	74		76		76		81	
LD06159PWB	72		69		73		74	
64062-9	65		61		66		66	
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Lower Upper Limit Limit 46 122 40 135 SMC #I = TCX SMC #2 = DCB

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D System Monitoring Compound diluted out

Analytics Report 64062 page 0041 of 47

PCB ACUEOUS
LABORATORY CONTROL DUPLICATE
PERCENT RECOVERY

Instrument E3: M GC Column #1 STX-CLPosticides 1 Column ID: 0.25 and GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 64062 Non-spiked sample: B06159PW Spike: L06159PWB

	LCSSPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPECE	SPIXE	SPEKE		SPIKE DUP	SPIKE DUP		
COMPOUND	ADDED (19/L)	ADDED (ug/L)	цмат	LIMIT	LIMIT	RESULT (ug/L)	RESULT (eg.L)	% REC	#	RESULT (ug/L)	% REC	ż	RPD
PCB 1016	2.0	2.0	79	113	25	0.00	1.86	93		1.80	93		3.1
PCB 1260	2.0	2.0	58	115	25	9.60	2.01	101		1.86	93		7.9
PCB 1016#2	2.0	2.9	81	142	25	9,60	1.83	93		1.79	89	П	2.5
DCID 4840 H2													

# Column to be used to flag resovery and RPD values outside of QC limits

\* Values outside QC limits

LCS/LCSD spike added values have been volume adjusted. Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.

PCB SOIL LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

Instrument ID: M GC Column #1: STX-CLPesticides 1 Column 1D: 0.25 mm

Column ID: 0.25 mm

SDG: **64062** Non-spiked sample: B0611905OX,,ArC GC Column #2: STX-CLPesticides II Spike: L06119PSOX,,A/C Spike duplicate: 1.006119PSOX,,A/C

r	1			_									
	LCS SPIKE	LCSD SPIKE	LOWER	LIPPER	RPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DUP		
COMPOUND	ADDED (ug/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (cg/kg)	RESULT (ug/kg)	%-REC	×	RESULT (up/kg)	%REC	,	R2D
PC8 1016	200	20 <b>0</b>	65	140	30	0	201	101		200	100		0.6
PCB 1260	200	260	60	130	30	0	201	101		201	101		9.1
PCH 1016 #2	206	260	65	146	39	0	219	110		237	119		7.9
PCB 1266 #2	200	200	60	130	30		216	108		215	102	П	66

$\dot{\pi}$ Column to be used to flag recovery and RPD values outside $c$	of QC limes
Values outside QU limns	

LCS/LCSD spike added values have been weight adjusted.

Non-spike rendt of "9" used in place of "U" to allow calculation of spike recovery.

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CHAIN OF CUSTODIES

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:COC.doc

Analytics Report 64062 page 0044 of 47

			Chain Of Custody Form	3	Sto	ģ	Form	_					
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	a V	borato		outh, NP 603) 43 03) 43C	4 03801 6-5111 7-2151	_	Sam ⊕	Samples were:	ind-d	elivered		$\sim u$	
Project#: 210954	210954 Proj. Name:	. <u>.</u>	Yale Mason Building	matr C =	Matrix Key: C = Concrete		2) Tel	2) Temp blank °C D. (C	Č	وه	6	0	,
Company: Woodard & Curran	an			4 ¥	WP = Wipe WW = Wastewater	ewater	3) Re	seived in g	ğ	dition Oor N	×	1	,
Contact: George Franklin				We e	SW = Surface Wate	SW = Surface Water	4 pH	checked k	خ		Be	7	
Address: 35 New England Bulsness Center	Buisness	Center		Ma.	DW = Drinking	DW = Drinking Water		sels checks	°å lydby	~	3,	70	()
Andover, MA 01810	310			8 8 8		a B			•		:V8	9	e).
Phone: 866 702 6371	PO#	Ono	Ouote #	" " "	E = Extract X = Other		Conta	Container Key			релів	2	bevie
Sampler (Signature):	Thor	A A	9	Pre	Preservation	tion	Ppla:	P-plastic G-glass			DOSH DOSH	)	084
Station Identification	Sample Date	Sample	Analysis	Seudun	HINO <sup>3</sup>	Methenol HCL H2C0,	ē O Matrix	Container number/typ	됩	pH Analytics Sample #		0	
YMB-CS-CC01A	6/10/09	1155	PCB 8082	Ĥ	×		0	16		64062 - 1			
YMB-CS-CC02A	6/10/09	1200	PCB 8082	n	×		O	16		B	61 1	) (	uiT
YMB-CS-CC03A	6/10/09	1205	PCB 8082		×		ပ	16		60)		-	_
YMB-CS-CC01B	6/10/09	1210	PCB 8082		×		O	16		h	60	ьо	
YMB-CS-CC02B	6/10/09	1215	PCB 8082	Î	×		O	16		5	0   :	hi)	
YMB-CS-CC01C	6/10/09	1220	PCB 8082		×		υ	r O		ه	PG PG	2	nea
YMB-CS-CC99	6/10/09	1220	PCB 8082		×		υ	, G		K			
YMB-CS-CC02C	6/10/09	1225	PCB 8082		×		ပ	1 G		8			
EB-01 ★	6/10/09	1235	PCB 8082		×		ΜO		5,5	0			
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					$\exists$			Doing Boning		a de la constante de la consta	_	Y	
Email Results to:	COMMENS / INSTRUCTIONS:	S/ IIISILIO	GOIS			É	1 1	State:	5	State Standard:		30	
GFEANELIN @		SOXHLE	SOXHLET EXTRACTION METHOD	9		Ĕ [	adk i nodau	[	Į	CT RSR	- منتخر ورز	3.	-
WOODARDE SECONDANCOM * AMIDE [Les (-) Fr () 18 100	*	) de/w	[Her(-) Prof.	5	-	<b>∑</b>			ΑM	(eg. S-1 or GW-1)	KOKU E:	<u> </u>	
Standard C Priority C	T		TT 05-00-10-00 TM		0	ة ة ا		× ×	¥ 5	EDD Required: Y*	VAB		'AG
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48 HB.								o de la			10uije 15uije		nnuus
Lab Approval Required ArabitosAEL DocumentsAEL COS	red			1	١	۴	*Fee may apply	- Vide	1	Page of	7	Ť	

Analytics Report 64062 page 0045 of 47

Page 1 of 1



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.

2. Fold the printed page along the horizontal line.

3. Place label in shipping pouch and affix it to your shipment so that the bercode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is traudurent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-deliver, miscellulery found in the content of the miscelluler section of the miscellulery 


Analytics Report 64062 page 0047 of 47 https://www.fedex.com/shipping/num/cm/r/murrame.num

6/10/2009

## ANALYTICS SAMPLE RECEIPT CHECKLIST analytics /-

AELLAB#: <u>64063</u>		COOLER :	NUMBER:		_
CLIENT: Woodau	id :	NUMBER OF	COOLERS:	1	
PROJECT: <u>Yale M</u>	ason Building	DATERE	CEIVED:	6/11/0	ì
	J.				
A: PRELIMINARY EXAMINA	ATION:	DATE COOLER	OPENED:	6/11/00	<u>.</u>
1. Cooler received by(initials)		Date Re	ceived:	CP G/III	29
2. Circle one:	Hand delivered	Shipped			
3. Did cooler come with a shippin	(If so, skip 3) og slip?		$\mathbf{v}$	N	
3a. Enter carrier	name and sirbill number here:	Fed Ex	790005	8165 958	<u> </u>
Were custody seals on the outsi How many & where:	de of cooler? Seal Date:	YA Seal Name:	MJ	N	
. 5. Did the custody seals arrive uni	proken and intact upon arrival?		(Y)	N	
6. COC#:			_		
7. Were Custody papers filled out	properly (ink,signed, etc)?		Œ)	N	
8. Were custody papers scaled in a	plastic hag?		( <b>y</b> )	N	
<ol><li>Did you sign the COC in the app</li></ol>	propriate place?		Ŷ	N	
<ol><li>Was the project identifiable fro</li></ol>	m the COC papers?		$\langle x \rangle$	N	
11. Was enough ice used to chill the	ic cooler?	N Temp. of cooler:		2.6	
B. Log-In: Date samples were lo	ogged in:(o)	<u>/1409</u> ву:	OP_		
12. Type of packing in cooler bubb	le wrap, popcom)		Ŷ	N	
13. Were all buttles sealed in separa	tte plastic bags?		Y	N	
14. Did all bottles arrive unbroken :	and were labels in good condition	n?	Ŷ	N	
15. Were all bottle labels complete(	ID Date time etc.)		Ŷ	N	
16. Did all bottle labels agree with o	custody papers?		Ŷ	N	
17. Were the correct containers use	d for the tests indicated:	,	(P)	N ·	
18. Were samples received at the co	rrect pH?		Ŷ	Ñ	
19. Was sufficient amount of sample	sent for the tests indicated?		Ŷ	N	
20. Were bubbles absent in VOA sar	nples?		Y	(N/A	
If NO, Li	ist sample #'s:				
21. Laboratory labeling verified by (	initials):		Date:	em 6/11100	į

CAMILYTICS LICYARI, DOCUMENTS/YORMS/SMPL CIKE: Analytics Report 64062 page 0046 of 47

Rev. 1, 4/9/08



196 Commerce Way Suite E Portsmouth: New Hampshire 03801 603-436-5111 Fax 603-430-2151 800-929-9906 800-929-9906 www.analyticslab.com

June 24, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Analytical Results Case Narrative Analytics # 64132 Yale Mason Bldg. Proj# 210954

Dear Mr. Franklin;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

Case Narrative/Non-Conformance Summary Case Narrative/Non-Conformance Summary Sample Log Sheet - Cover Page CT Certification Page PCB Form 1 Data Sheet for Samples and Blanks Chromatograms PCB Form 10 Confirmation Results PCB Form 3 M/MSD (LCS) Recoveries Chain of Custody (COC) Forms

AnalyticsLLC:A Narratives: WCI:Yalc64132.doc

Analytics Report 64132 page 0001 of 29

environmental laboratory LLC

195 Commerce Way Suite E Partsmouth, New Hampshire 03801 603-436-5111 Fax 603-430-2161 800-929-9006 www.analytiastaa.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 64132 Revision: Rev. 0

Re: Yale Mason Lab

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 22 June 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number Sample Date Station Location Analysis Comments 64132-1 06/19/09 YMB-VS-CC026 EPA 8082 (PCBs only) 06/19/09 64132-2 YMB-VS-CC027 EPA 8082 (PCBs only) 64132-3 06/19/09 YMB-VS-SS001 EPA 8082 (PCBs only)

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen 1. Knollmeyer Lab. Director

6/24/2009

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OC NON-CONFORMANCE SUMMARY

Sample Receipt: No exceptions.

PCBs by EPA Method 8082: Sample 64132-3 required dilution due to matrix affect or PCB concentrations in the sample.

The MS/MSD analyzed on sample 64132-3 had high recoveries and RPDs for PCB 1016 and PCB 1260 due to the concentrations of PCB 1254 detected in the parent sample. The MSD also had low Decachlorobiphenyl (DCB) surrogate recovery on column #2. Column #1 was in control for both surrogates. The laboratory control samples (L06229PSOX/LD06229PSOX) were in control for all analytes. Results were reported without qualification.

Sincerely.

ANALYTICS Environmental Laboratory, LLC

Stephen Knollmeyer Laboratory Director

AnalyticsLLC:A Narratives:WCI:Yale64132.doc

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## Surrogate Compound Limits

	Matrix:	Aqueous	Solid	
	Units:	% Recovery	% Recovery	Method
Volatile Organic Compounds - Dri	nking Wa	ter		
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		2111 324.2
1,2-Dichlorobenzene-d4 .		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	21102702001
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compounds				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA0		30-150	30-150	
Gasoline Range Organics/TPH Gaso	line			
Trifluorotoluene TFT (FID)		60-140	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH

Analytics Report 64132 page 0004 of 29



analytics / www.

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Lab Project Number: 210954

Field Sample ID: Lab QC

June 24, 2009 SAMPLE DATA

Lab Sample ID: B06229PSOX Matrix: Percent Solid: Soil N/A Dilution Factor: Collection Date: 1.0 Lab Receipt Date: Extraction Date:

Analysis Date: 06/23/09

	Quantitation Limit pg/kg	Results
COMPOUND	Limit µg/kg	μg/kg
CB-1016	33	IJ
CB-1221	33	U
CB-1232	33	Ū
CB-1242	33	Ü
CB-1248	33	υ
CB-1254	33	Ū
CB-1260	33	U
S	urrogate Standard Recovery	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Decachlorobiphenyl

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C COMMENTS:

Results are expressed on a dry weight basis.

Authorized signature Mlblell

96 %

Analytics Report 64132 page 0006 of 29

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\062309-M\
Data File : M18111B.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 23 Jun 2009 4:18 pm
Operator :

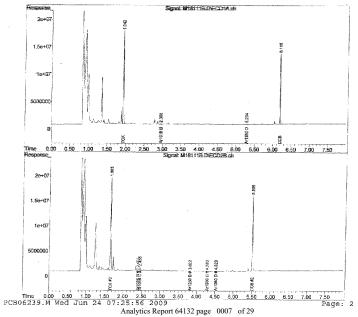
: B06229PSOX,,A/C Sample

Misc : SOIL
ALS Vial : 51 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 07:25:56 2009
Quant Method: C:\msdchem\/l\methods\/PCB06239.M
Quant Title : Aroclor 1016/1260
QLast Update : Tue Jun 23 11:32:14 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Lab

Project Number: 210954 Field Sample ID: Lab QC June 24, 2009 SAMPLE DATA

Lab Sample ID: B06199PW Matrix: Percent Solid: N/A Dilotion Factor: Collection Date: Lab Receipt Date: Extraction Date: 06/19/09

Analysis Date:

PCB ANALYTICAL RESULTS				
COMPOUND	Quantitation Limit µg/kg	Results Pg/kg		
PCB-1016	33	υ		
PCB-1221	33	U		
PCB-1232	33	Ω		
PCB-1242	33	U		
PCB-1248	33	U		
PCB-1254	33	U		
PCB-1260	33	υ		
Surrogate Standard Recovery				
	2,4,5,6-Tetrachtoro-m-xylene 83	%		
	Decachlorobiphenyl 74	%		
U=Undetected J=Estimated E=Exceeds Calibration Range		B=Detected in		

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Results are expressed on a day weight basis.

Signal(s) Acq On Operator Sample B06199PW,RR,,A/C Misc ALS Vial : 66 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 07:26:28 2009
Quant Method: C.\msdchem\l\METHOD\\PCB06239.M
Quant Title : Aroclor 1016/1260
QLast Update : Tue Jun 23 11:32:14 2009
Response via : Initial Calibration
Integrator: ChemStation Volume Inj. Signal #1 Phase Signal #1 Info Signal #2 Phase: Signal #2 Info : Signal: M18127B.DVFCD1A ch 1.8e+07 1.6e+07 1.4e+07 1.2e+07 1e+07 8000000 600000 2000000 CB 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal M18127B.DIECD2B.ch 1.5e+07 6.00 6.50 7.00 7.50 Page: 2 Time 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 PCB06239.M Wed Jun 24 07:26:28 2009 4.00 5.00 5.50 Analytics Report 64132 page 0009 of 29 Quantitation keport (NOT Kevlewed)

Additered from Kebott

Mi8127B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 23 Jun 2009 6:59 pm

Data Path : C:\msdchem\1\DATA\062309-M\Data File : M18127B.D

(NOL Keviewed)

Data Path : C:\msdchem\l\DATA\062309-M\
Data File : M18148B.D
Signal(s) : Signal #1: ECD1A.ch Signal
Acq On : 24 Jun 2009 12:40 pm Mi8148B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 24 Jun 2009 12:40 pm Operator B06249PO,,A/C Sample Misc : SOIL ALS Vial : 82 Sample Multiplier: 1 Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 13:46:33 2009
Quant Method: C:\msdchem\l\METHODS\PCB06239.M
Quant Title: Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via: Initial Calibration
Integrator: ChemStation Integrator: ChemStation Volume Inj. : Signal #1 Phase : Signal #1 Info : Signal #2 Phase: Signal #2 Info :

Signal: M18148B DVECD1A ch 2e+07 1e+07 500000 0.50 1.00 1.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal: M181488.D\ECD2B.ch 2.5e+07 2e+07 1e+07 5000000 21250 C # 4,289 6.00 6.50 7.00 7.50 Time 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.50 5.50 PCB06239.M Wed Jun 24 13:46:33 2009 Page: 2

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analytics /-

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

June 24, 2009 SAMPLE DATA B06249PO

CLIENT SAMPLE ID Project Name: Yale Mason Lab Lab Sample ID: Matrix: Soil Percent Solid: N/A Dilution Factor: 1.0 Collection Date: Lab Receipt Date: Extraction Date:

06/24/09

Analysis Date:

PCB ANALYTICAL RESULTS Quantitation Limit µg/kg COMPOUND PCB-1016 33 IJ 33 PCB-1223 PCB-1232 PCB-1242 PCB-1248 PCB-1254 PCB-1260

> 2,4,5,6-Tetrachloro-m-xylene 99

Decachlorobiphenyl 67 %

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Surrogate Standard Recovery

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C COMMENTS: Results are expressed on a dry weight basis.

PCB Report

Authorized signature Mullill

June 24, 2009

Analytics Report 64132 page 0010 of 29

analytics \ \_\_\_\_\_

195 Commerce Way Portsmouth, New Hompshire 03801 603-636-5111 Fex 603-630-2151 200-030-0001

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

SAMPLE DATA Lab Sample ID: 64132-1 CLIENT SAMPLE ID Matrix; Solid Percent Solid: 94 Project Name: Yale Mason Lab Dilution Factor: 1.1 Project Number: 210954 Collection Date: 06/19/09 Lab Receipt Date: 06/22/09 Field Sample ID: YMB-VS-CC026 Extraction Date: 06/22/09 06/24/09 Analysis Date:

	PCB ANALYTICAL RESULTS									
COMPOUND	Quantitation Éimit µg/kg	Results µg/kg								
PCB-1016	36	ΰ								
PCB-1221	36	ŭ								
PCB-1232	36	U								
PCB-1242	36	U								
PCB-1248	36	U								
PCB-1254	36	135								
PCB-1260	36	U								
	Surrogate Standard Recovery									
	2,4,5,6-Tetrachleru-m-xylene         46         %           Decachlorobiphenyl         76         %									

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082. Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature Milblull

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in

## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

GC Column #1: STX-CLPesticides I

Sample: 64132-1,A/C

Column ID: 0.25 mm

Data File: M18152.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.1

Column ID: 0.25 mm

Column #1 Column #2 COMPOUND SAMPLE RESULT (ug/kg) SAMPLE RESULT (ug/kg) RPD PCB 1254 129 135

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 64132 page 0013 of 29

analytics-/-

Mr. George Franklin Woodard & Curran 35 NE Business Center Saite 180 Andover MA 01810

Field Sample ID: YMB-VS-CC027

June 24, 2009 SAMPLE DATA

CLIENT SAMPLE ID Project Name: Yale Mason Lab Project Number: 210954

Lab Sample ID: 64132-2 Matrix: Solid Percent Solid: 97 Dilution Factor: 1.0 Collection Date: 06/19/09 06/22/09 Lab Receipt Date: Extraction Date: Analysis Date: 06/22/09

PCB ANALYTICAL RESULTS Quantitation Limit µg/kg Results µg/kg COMPOUND PCB-1016 U 33 PCB-1221 PCB-1232 33 U PCB-1242 ŧ PCB-1248 U PCB-1254 24 J PCB-1260

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene

Decachlorobiphenyl

Authorized signature Mullull

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight basis.

Analytics Report 64132 page 0015 of 29

C:\msdchem\1\DATA\062309-M\ M18152.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 24 Jun 2009 1:21 pm

Quantitation Report

Data Path Data File Signal(s) Acq On Operator Sample

Misc

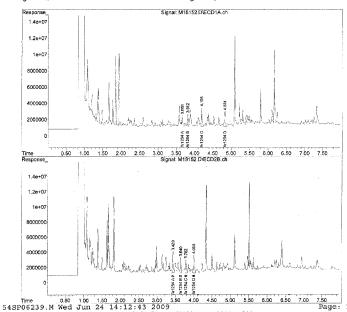
:
64132-1,A/C
: SOIL
: 86 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 14:12:32 2009
Quant Method: C:\msdchem\1\METHODS\54SP06239.M
Quant Title:
QLast Update: Wed Jun 24 08:18:45 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :

(QT Reviewed)



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Analytics Report 64132 page 0014 of 29

Instrument ID: M

SDG: 64132

GC Column #1: STX-CLPesticides I

Sample: 64132-2

Data File: M18153.D

Column ID: 0.25 mm GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	23 J	24 J	2.3	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Quantitation Report (QT Reviewed)

C:\msdchem\1\DATA\062309-M\

M18153.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 24 Jun 2009 1:31 pm

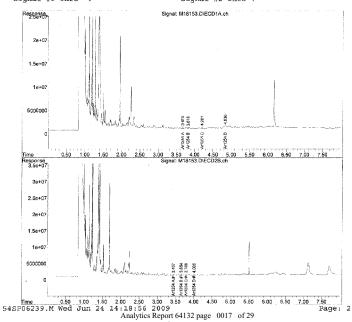
Data Path:
Data File:
Signal(s):
Acq On:
Operator:
Sample 64132-2,A/C Sample

: SOIL : 87 Sample Multiplier: 1 Misc ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 14:18:35 2009
Quant Method: C:\msdchem\l\METHODS\54SP06239.M
Quant Title:
QLast Update: Wed Jun 24 08:18:45 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64132

GC Column #1: STX-CLPesticides I

Sample: 64132-3,1:5,,A/C

Column ID: 0.25 mm

Data File: M18142.D

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	it
PCB 1254	2665	2601	2.4	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10

Analytics Report 64132 page 0019 of 29



.ee sommerce Wey Portimoviti, New Hompshire 0380 503-485-5117 Fax 603-430-2151 500-029-9904

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Lab Project Number: 210954 Field Sample ID: YMB-VS-SS001 June 24, 2009 SAMPLE DATA

Lab Sample ID: 64132-3 Matrix: Solid Percent Solid: Dilution Factor: Collection Date: 06/19/09 Lab Receipt Date: 06/22/09 Extraction Date: 06/22/09

Analysis Date:

	PCB ANALYTICAL RESULTS										
COMPOUND	Quantitation Limit µg/kg	Results µg/kg									
PCB-1016	170	υ .									
PCB-1221	170	<b>u</b>									
PCB-1232	1.70	U									
PCB-1242	170	υ									
PCB-1248	170	n									
PCB-1254	170	2660									
PCB-1260	170	U									
	Surrogate Standard Recovery										
	2,4,5,6-Tetrachloro-m-xylene 85 Decachlorobiphenyl 69	% %									
U=Undetecte	d J=Estimated E=Exceeds Calibration Range	B=Detected in									

Analytics Report 64132 page 0018 of 29

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Authorized signature Mulliall

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082

Ouantitation Report (Not Reviewed)

Data Path Data File Signal(s)

C:\msdchem\1\DATA\062309-M\ M18142.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 24 Jun 2009 9:38 am Acq On

Results are expressed on a dry weight basis

Operator :
Sample : 64132-3,1:5,,A/C
Misc : SOIL
ALS Vial : 78 Sample Multiplier: 1

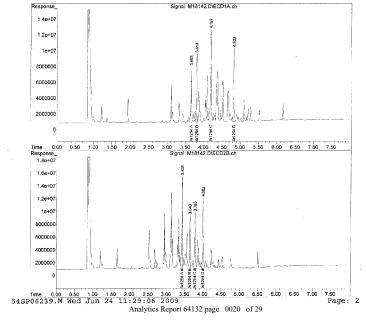
Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jun 24 11:29:06 2009
Quant Method : C:\msdchem\1\METHODS\54SP06239.M
Quant Title :
QLast Update: Wed Jun 24 08:18:45 2009
Response via : Initial Calibration
Integrator: ChemStation

COMMENTS:

PCB Report

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :





# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 64132

	Column #1				Column #2					
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	#	SMC 2 (%)	#		
B06229PSOX,,A/C	97		96		94		85			
L06229PSOX,,A/C	100		97		98		88			
LD06229P8OX,,A/C	105		104		101		94			
64132-3,MS,,A/C	93		78		86		61			
64132-3,MSD,,A/C	50		45		49		36	*		
								_		
								_		
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	1				L					

Lower Limit 40 40 Upper Limit 130 130 SMC #1 = TCX SMC #2 = DCB

- # Column to be used to flag recovery values outside of QC limits

  \* Values outside QC limits

  D System Monitoring Compound diluted out

PCB FORM 2 Analytics Report 64132 page 0022 of 29

PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 64132

	Column #1				Column #2   SMC 1 (%)  #   SMC 2 (%)  #					
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	Ħ	SMC 2 (%)	#		
B06199PW.RRA/C	83		74		85		69			
B06199PW,RR,,A/C 64132-3,1:5,,A/C	93		91		85		69			
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Upper Limit 130 130 SMC #1 = TCX SMC #2 = DCB

- Column to be used to flag recovery values outside of QC limits
   Values outside QC limits
   System Monitoring Compound diluted out

PCB FORM 2 Analytics Report 64132 page 0023 of 29

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

SDG: 64132

		Column	1#1	Column #2					
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	#	SMC 2 (%)	#	
B06249PO,,A/C . 64132-1,A/C	99		67		99		53		
64132-1.A/C	46 77		76		42		62		
64132-2	77		85		66		54		
							-		
		_			-				
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Lower Limit 40 40 Upper Limit 130 130 SMC #1 = TCX SMC #2 = DCB

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D System Monitoring Compound diluted out

PCB FORM 2 Analytics Report 64132 page 0024 of 29

#### PCB SOIL LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

Instrument ID: M
GC Celtum #1. STX-CLPesticides 1
Column ID: 9.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 9.25 mm

SDG: G44132
Nea-spiked sample: H00229PSOX\_A/C
Spike: L06129PSOX\_A/C

	LCS SPIKE	LCSO SPIKE	LOWER	UPPER	K20	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DUP			
COMPOUND	ADDED (eg/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% 32C	٨	RESULT (ug/kg)	% REC	è	RPD	4
PCB 1016	200	200	65	140	30	0	206	163		215	108	L	4.7	
PCB 1260	200	200	60	130	30	0	208	104		224	112		7.5	
PCB 1016 #2	200	200	65	140	30	0	202	10)		239	119		16,5	
PCB 1260 #2	200	200	60	130	30	0	214	107		224	112		4.9	П

# Column to be used to flag recovery and RPD values outside of QC limits

Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "II" used in place of "U" to allow calculation of spike recover

comments.

PCB FORM 3

Analytics Report 64132 page 0025 of 29

GC Column #1: STX-CLPestecides 1 Column ID: 0.25 mm GC Column #2: STX-CLPesticides 11 Column ID: 0.25 mm 80G: 64132 Non-spiked sample: 6432-3,,A/C

Spike: 64132-3,MS,,A/C

	MS SPIKE	MSO SPIKE	LOWER	t/PPER	RPI)	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DIJE			
COMPOUND	ADDED (ng/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	KESULT (ug/kg)	KESULT (un/kg)	% REC	ul	RESULT (vg/kg)	% RBC	E	RPD	×
PCB 1616	195	192	65	140	30		602	309	٠	327	170		59,2	-
PCB 1260	195	192	60	130	30	е	£185	608	٠	635	339		60.5	Ŀ
PCB 1016 #2	195	192	65	146	30	6	223	115		133	69		50.5	1.
PCB 1260 #2	195	192	66	130	30	6	1025	526		566	294	ŀ	57.6	Ŀ

# Column to be used to flag recovery and RPD values omside of QC limits

Values outside QC limits

MS/MSO apike added values have been weight adjusted.

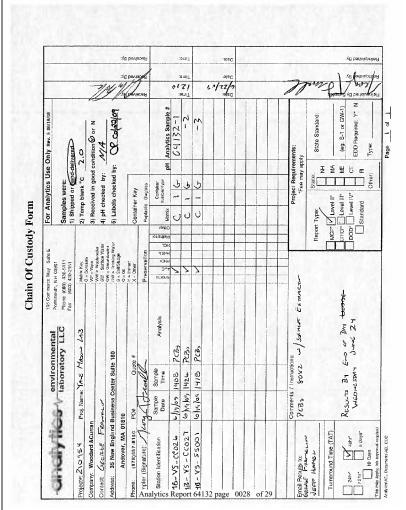
Non-spike result of '0" used in place of "U" to allow calculation of spike recovery.

als:

PCB FORM

Analytics Report 64132 page 0026 of 29

CHAIN OF CUSTODIES AnalyticsLLC:ABL Documents LLC:Pkg Dividers:COC.doc Analytics Report 64132 page 0027 of 29



#### ANALYTICS SAMPLE RECEIPT CHECKLIST

AELLABE 44132	COOLER	NUMBER:		
CLIENT: Woodard & Currain	NUMBER C	F COOLERS:	1 .	
PROJECT: Yale Masen Lab	DATE RECEIVED:			
A: PRELIMINARY EXAMINATION:	DATE COOLE	R OPENED:	6-22-09	
1. Cooler received by (initials)	Date R	eceived:	6-22-09	
2. Circle one: Hand delivered	Shipped			
3. Did cooler come with a shipping slip?	•	Y	. N	
3a. Enter carrier name and sirbill number here:	11.54			
Were custody seals on the outside of cooler? How many & where: Seal Date:	Seal Name:	Y	N -	
5. Did the custody seals arrive unbroken and intact upon arrival?		Y	N ·	
6. COC#:				
7. Were Custody papers filled out properly (ink,signed, etc)?		$\odot$	N	
8. Were custody papers sealed in a plastic bag?		<b>Ø</b>	N	
9. Did you sign the COC in the appropriate place?		Ø	N	
10. Was the project identifiable from the COC papers?		$\odot$	N	
11. Was enough ice used to chill the cooler?	Temp. of cooler:		2.0°C	
B. Log-In: Date samples were logged in:	By:	16		
12. Type of packing in cooler(bubble wrap, popcorn)		Ø	N	
13. Were all bottles sealed in separate plastic bags?		Ø	N .	
14. Did all bottles arrive unbroken and were labels in good condition?		Ø	N	
15. Were all bottle labels complete(ID Date, time, etc.)		0	N N	
16. Did all bottle labels agree with custody papers?		Ø	N	
17. Were the correct containers used for the tests indicated:		Ø	Ν .	
18. Were samples received at the correct pH?		Y	NA	
19. Was sufficient amount of sample sent for the tests indicated?		Ø16	N_	
20. Were bubbles absent in VOA samples?		Ø4220	1 (1/4)	
If NO, List sample #'s:				
21. Laboratory labeling verified by (initials):		Date:	R Glaplos	

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Rev. 1, 4/9/08





195 Commerce Way Suite E Portsmouth, New Hampshire 03801 638-436-6111 Fax 603-430-2151 800-929-906 www.analyliaslab.com

July 20, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

RE:

Analytical Results Case Narrative Analytics # 64310 Yale Mason Bldg. Proj# 210954

Dear Mr. Franklin;

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

Case Narrative/Non-Conformance Summary Case Narrative/Non-Conformance Summary
Sample Log Sheet - Cover Page
CT Certification Page
PCB Form 1 Data Sheet for Samples and Blanks
Chromatograms
PCB Form 10 Confirmation Results PCB Form 3 MS/MSD (LCS) Recoveries Chain of Custody (COC) Forms

AnalyticsLLC:A\_Narratives:WCI:Yale64310.doc Analytics Report 64310 page 0001 of 31

195 Commerce Way Suite E Portsmouth, New Hampshire 33801 603-436-5111 Fax 603-430-2151 800-929-9906 www.analyticsiab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 64310

Revision: Rev. 0

Re: Yale Mason Building

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 15 July 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results portain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein coffrom to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number	Sample Date	Station Location	<u>Analysis</u>
64310-1	07/15/09	YMB-VS-SS002	EPA 8082 (PCBs only)
64310-2	07/15/09	YMB-VS-SS003	EPA 8082 (PCBs only)
64310-3	07/15/09	YMB-VS-SS004	EPA 8082 (PCBs only)
64310-4	07/15/09	YMB-VS-SS005	EPA 8082 (PCBs only)
64310-5	07/15/09	VMR-VS-55006	EPA 8082 (PCBs only)

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate up call.

Authorized signature

Stephen L. Knollmeyer Lab. Director 7/22/2009

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#### QC NON-CONFORMANCE SUMMARY

Sample Receipt:

No exceptions.

PCBs by EPA Method 8082:

Sample 64310-1 required dilution due to PCB concentrations detected in the sample. Sample 64310-4 required the lower value to be reported off of column #2 due to matrix interferences on column #1.

Sincerely, ANALYTICS Environmental Laboratory, LLC

Stephen Knollmeyer Laboratory Director

AnalyticsLLC:A Narratives:WCI:Yale64310.doe

Analytics Report 64310 page 0002 of 31

#### Surrogate Compound Limits

	Matrix:	Aqueous	Solid	
	Units:	% Recovery	% Recovery	Method
Volatile Organic Compounds - D	rinking Wa	ter		
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compound	s			
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobiphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA0		30-150	30-150	
Gasoline Range Organics/TPH Gas	oline			
Trifluorotoluene TFT (FID)		60~140.	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH

PCB DATA SUMMARIES

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:PCB.doc

Analytics Report 64310 page 0005 of 31

Quantitation Report (Not Reviewed)

Data Path : Data File : Signal(s) :

C:\msdchem\1\DATA\071309-M\ M18512B.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 16 Jul 2009 12:23 pm

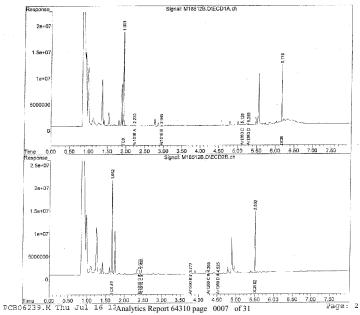
Acq On Operator Sample Misc B07159PSOX,,A/C

SOIL
1 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 16 12:51:39 2009
Quant Method : C:\msdchem\l\METHODS\PCB06239.M
Quant Title : Arcolor 1016/1260
QLast Update : Tue Jun 23 11:32:14 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



analytics / environmental

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954

Field Sample ID: Lab OC

July 21, 2009

SAMPLE DATA Lab Sample ID: B07159PSOX

Percent Solid: N/A Dilution Factor: Collection Date: Lab Receipt Date:

07/15/09 Extraction Date: Analysis Date:

:	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	· U
PCB-1260	33	U

Surrogate Standard Recovery

2,4.5,6-Tetrachloro-m-xylene 97 %

83 % Decachlorobinhenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

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Analytics Report 64310 page 0006 of 31

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190 Commerce Way Portsmouth, New Hampshire 039 503-435-5111 Fax 503-430-215:

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building

Project Number: 210954

Field Sample ID: Lab QC

July 21, 2009

Lab Sample ID: B07159PSOX RR

Matrix: Soil Percent Solid: Dilution Factor: 1.0

Collection Date: Lab Receipt Date: Extraction Date:

07/15/09 Analysis Date: 07/17/09

	PC	B ANALYTICAL R	ESUL	.TS	
сомі	OUND	Quantitation Limit µg/kg			Results µg/kg
PCB-10	16	33			Ū
PCB-12	21	33			U
PCB-12	32	33			U
PCB-12	¥2	33			U
PCB-12	18	33			U
PCB-12	54	33			U
PCB-12	50	33			U
-	Sur	rogate Standard Recove	ГУ		
		-Tetrachloro-m-xylene	99	q,	
	מ	eeachlorobiphenyl	75	%	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Analytics Report 64310 page 0008 of 31

Quantitation Report (Not Reviewed) Data Path Data File Signal(s) Acq On Operator Sample Misc ALS Vial : C:\msdchem\1\DATA\071309-M\
: M18527B.D
: Signal #1: ECD1A.ch Signal #2: ECD2B.ch
: 17 Jul 2009 7:33 am B07159PSOX,RR,,A/C : SOIL : 1 Sample Multiplier: 1 ALS Vial Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 20 09:04:29 2009
Quant Method: C:\msdchem\1\METHODS\PCB06239.M
Quant Title: Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info Signal #2 Phase: Signal #2 Info : Signal: M18527B.D\ECD1A.ch 1.5e+07 1e+07 ΧOL 800 Time 0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 Signal M18527B.DVECD2B.ch 4e+07 

## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

Integrator: ChemStation

SDG: 64310

GC Column #1: STX-CLPesticides I

Sample: 64310-1,1:50,,A/C

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Data File: M18540.D

Dilution Factor: 50.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	н
PCB 1254	36843	30961	17.3	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 64310 page 0011 of 31



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-VS-SS002

July 21, 2009 SAMPLE DATA

Lab Sample ID: 64310-1 Solid Percent Solid: Dilution Factor: 07/15/09 Collection Date: Lab Receipt Date: 07/15/09 07/15/09 Extraction Date: Analysis Date: 07/17/09

	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	1650	U
PCB-1221	1650	U
PCB-1232	1650	U
PCB-1242	1650	U
PCB-1248	1650	υ
PCB-1254	1650	36800
PCB-1260	1650	U
	Surrogate Standard Recovery	
2,4	\$5.6-Tetrachloro-m-xylene * %  Decachlorobiphenyl * %	

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. Results are expressed on a dry weight basis.

\* The surrogates were diluted out.

Authorized signature J. Kly

Analytics Report 64310 page 0010 of 31

Quantitation Report

(Not Reviewed)

Data Path : Data File : Signal(s) :

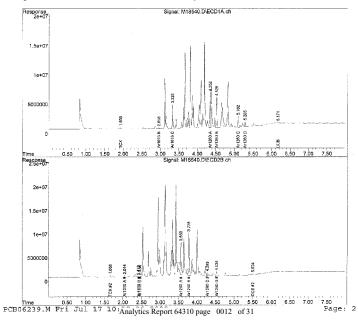
C:\msdchem\1\DATA\071309-M\ M18540.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 17 Jul 2009 10:18 am Acq On

Operator : Sample : 64310-1,1:50,,A/C Misc : SOIL ALS Vial : 62 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 17 10:38:00 2009
Quant Method: c:\msdchem\l\METHODS\PCB06239.M
Quant Title: Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Samole ID: YMB-VS-SS003

July 21, 2009 SAMPLE DATA

Lab Sample ID: 64310-2 Matrix: Percent Solid: Solid Dilution Factor: 1.0 07/15/09 Collection Date: Lab Receipt Date: 07/15/09 Extraction Date: 07/15/09 Analysis Date: 07/17/09

1	PCB ANALYTICAL RESULTS	
COMPOUND	Quantitation Limit µg/kg	Results μg/kg
PCB-1016	33	U
PCB-1221	33	U
PCB-1232	33	U
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	67
PCB-1260	33	υ

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 93 68 %

Decachlerobiohenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

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Analytics Report 64310 page 0013 of 31

Ouantitation Report (Not Reviewed)

C:\msdchem\1\DATA\071309-M\ M18533.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 17 Jul 2009 8:34 am

Data Path : Data File : Signal(s) :

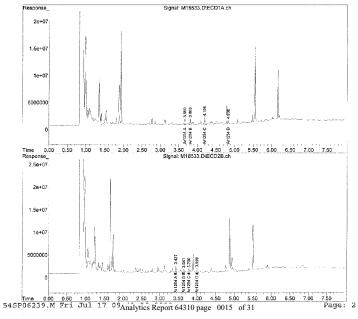
Acq On Operator Sample 64310-2,,A/C

Misc : SOIL ALS Vial : 56 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 17 09:41:38 2009
Quant Method: C:\msdchem\l\METHODS\548P06239.M
Quant Title:
QLast Update: Wed Jun 24 08:18:45 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. Signal #1 Phase Signal #1 Info

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64310

GC Column #1: STX-CLPesticides I

Sample: 64310-2,,A/C

Column ID: 0.25 mm

Data File: M18533.D

GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

Dilution Factor: 1.0

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	ij
PCB 1254	67	59	13.3	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 64310 page 0014 of 31

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Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-VS-SS004 July 21, 2009 SAMPLE DATA

Lab Sample ID: 64310-3 Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 07/15/09

Lab Receipt Date: Extraction Date: 07/15/09 Analysis Date: 07/17/09

PCB ANALYTICAL RESULTS					
COMPOUND	Quantitation Lamit µg/kg	Results μg/kg			
PCB-1016	33	u .			
PCB-1221	33	U			
PCB-1232	33	ű			
PCB-1242	33	U			
PCB-1248	33	U			
PCB-1254	33	Ŭ			
PCB-1260	33	U			
PCB-1260	55				

Surrogate Standard Recovery

2,4,5,6-Tetrachloro-m-xylene 90 %

Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

COMMENTS:

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. Results are expressed on a dry weight basis

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Analytics Report 64310 page 0016 of 31

Quantitation Report (Not Reviewed)

Data Path :

C:\msdchem\1\DATA\071309-M\ M18536.D Sigmal #1: BCD1A.ch Signal #2: ECD2B.ch 17 Jul 2009 9:04 am

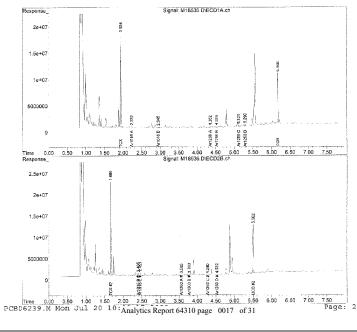
Data Path Data File Signal(s) Acq On Operator Sample Misc 64310-3,,A/C

SOIL 59 Sample Multiplier: 1 ALS Vial

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 17 09:42:19 2009
Quant Method: C:\nsdchem\/\mathbf{METHODS}\PCB06239.M
Quant Title: Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



#### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64310

GC Column #1: STX-CLPesticides 1

Sample: 64310-4,,A/C

Column ID: 0.25 mm

Data File: M18538.D

GC Column #2: STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (vg/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	774	704	9.5	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:

PCB FORM 10 Analytics Report 64310 page 0019 of 31 analytics /

195 Commerce Way Portsmouth, New Hampshire 0380 603-636-5111 Pax 663-430-2151

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID

Project Name: Yale Mason Building Project Number: 210954 Field Sample ID: YMB-VS-SS005

July 21, 2009 SAMPLE DATA

64310-4 Lab Sample 1D: Matrix: Percent Solid: Solid Dilution Factor: 1.0 Collection Date: 07/15/09 Lab Receipt Date: 07/15/09 07/15/09 Extraction Date:

07/17/09

Analysis Date:

PCB ANALYTICAL RESULTS Quantitation Limit µg/kg Results µg/kg COMPOUND 33 U PCB-1016 PCB-1221 33 U 33 PCB-1232 33 PCB-1242 33 PCB-1248 33 704 PCB-1254 33 PCB-1260 Surrogate Standard Recovery 2,4.5,6-Tetrachloro-m-xylene 56 48 % Decachlorobiphenyl

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS: Results are expressed on a dry weight basis.

Authorized signature #1.Klaye

Analytics Report 64310 page 0018 of 31

(Not Reviewed) Quantitation Report

Data Path : Data File :

C:\msdchem\1\DATA\071309-M\ M18538.D Signal #1: ECD1A.ch Signal #2: ECD2B.ch 17 Jul 2009 9:24 am Signal(s):

Acq On Operator Sample

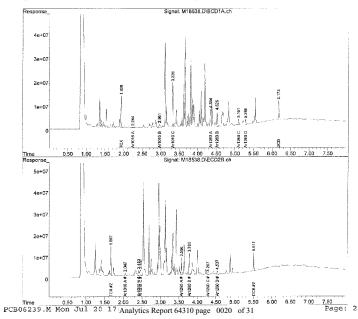
64310-4,,A/C

Misc : SOIL
ALS Vial : 61 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 20 17:23:21 2009
Quant Method: C:\msdchem\l\METHODS\PCB06239.M
Quant Title : Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



193 Commerce Way Posteriouth, New Hampshire USO 603-435-5111 Fax 603-430-2151 son-son-son-

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Building

Project Number: 210954 Field Sample ID: YMB-VS-SS006 July 21, 2009 SAMPLE DATA

64310-5 Lab Sample ID: Matrix: Percent Solid: Solid 97 Dilution Factor: 1.0 07/15/09 Collection Date: Lab Receipt Date: 07/15/09 Extraction Date: 07/15/09

07/17/09

Analysis Date:

	PCB ANALYTICAL RESUL	TS
COMPOUND	Quantitation Limit µg/kg	Results µg/kg
PCB-1016	33	u
PCB-1221	33	U
PCB-1232	33	Ū
PCB-1242	33	U
PCB-1248	33	U
PCB-1254	33	40
PCB-1260	33	U
\$	Surrogate Standard Recovery	
2,4	5,6-Tetrachloro-m-xylene 95	<del>%</del> ,
	Decachlorobiphenyl 58	%

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

COMMENTS:

Authorized signature \$\frac{\frac{1}{2}\lambda \lambda 
Analytics Report 64310 page 0021 of 31

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\071309-M\
Data File : M18537.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 17 Jul 2009 9:14 am

Signal(s):
Acq On:
Operator:
Sample:

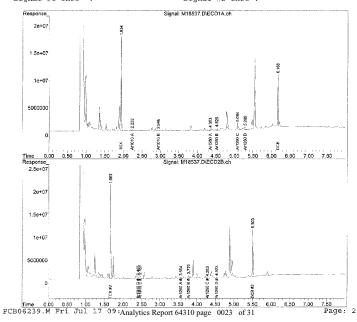
64310-5,,A/C

Misc : SOIL
ALS Vial : 60 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Jul 17 09:42:24 2009
Quant Method: C:\msdchem\l\METHODS\PCB06239.M
Quant Title : Aroclor 1016/1260
QLast Update: Tue Jun 23 11:32:14 2009
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



## PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64310

GC Column #1: STX-CLPesticides I

GC Column #2: STX-CLPesticides II

Sample: 64310-5,,A/C

Column ID: 0.25 mm

Data File: M18537.D

Dilution Factor: 1.0

Column ID: 0.25 mm

	Column #1	Column #2		
COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	34	40	16.2	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

Comments:		

PCB FORM 10

Analytics Report 64310 page 0022 of 31

analytics / exercise

PCB QC FORMS

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:PCBQC.doc

Analytics Report 64310 page 0024 of 31

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

SDG: 64310

Instrument ID: M GC Column #1; STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

		Column #1				Colum	n #2	
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	ij	SMC 1 (%)	#	SMC 2 (%)	#
B07159PSOX,,A/C	97		83		90		76	
L07159PSOXA/C	98		84		90		77	
L07159PSOX,,A/C LD07159PSOX,,A/C	99		94		95		78	
DDC11D71 COTABLE	1							
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	Lower Limit	Upper
SMC #1 = TCX	40	130
SMC #2 = DCB	40	130

- # Column to be used to flag recovery values outside of QC limits

  \* Values outside QC limits

  D System Monitoring Compound diluted out

Analytics Report 64310 page 0025 of 31

PC9 SOIL LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

Instrument ID: M GC Column#1: STX-CLPesticides 1 Column ID: 0.25 acu

SDG: 64310

Non-spiked sample: B07159PSOX\_A/C Spike: L07159PSOX,.A/C

GC Column #2; Column ID:	STX-CI Pesticides	п
Commin no.	023 1111	
	T CE ENTIFE	1 Cen entr

	LCS SPIKE	LCSD SPIKE	LOWER	UPPER	RPD	NON-SPIKE	SPIKE	SPIKE	SPIKE DUP	SPIKE DUP		-
COMPOUND	ADDED (mg/kg)	ADDED (ug/kg)	LIMIT	LDAT	LIMIT	RESULT (ugylor)	RESULT (m/kg)	% KEC A	RESULT (ag/kg)	% REC #	RPD	ř
PCB 1016	200	200	65	140	30	- 6	2,22	Lit	210	105	5.5	4
PCB 1260	200	200	60	130	36	0	204	102	215	108	5.3	
PCB 1016#2	200	200	65	140	30	0	251	125	259	130	3.3	
PCB 1260 #2	200	260	66	130	50	q	204	162	209	104	2.4	

$\vec{x}$ Column to be used to flag recovery and RPD values outside of QC limit	s
---------------------------------------------------------------------------------	---

Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "C" used in place of "U" to allow calculation of spike recovery

# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

SDG: 64310

Instrument ID: M GC Column #1: STX-CLPesticides I Column ID: 0.25 mm GC Column #2: STX-CLPesticides II Column ID: 0.25 mm

		Colam		Column #2 SMC 1 (%) # SMC 2 (%) #							
SAMPLE ID	SMC 1 (%)	#	SMC 2 (%)	#	SMC 1 (%)	tt	# SMC 2 (%)				
B07159PSOX,RR,,A/C	99		75		99	Г	66				
64310-2,,A/C	93		68		90	T	55				
64310-2,MS.,A/C	92		72		88		67				
64310-2,MSD,,A/C	94		73		93		68				
64310-3,,A/C	90		69		94		64				
64310-5,,A/C	91		72		95		58				
64310-4,,A/C	66		60		56		48				
64310-1,1:50,,A/C	D		D		D		D				
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Lower Limit 40 40 Upper Limit SMC #1 = TCX SMC #2 = DCB 130 130

- # Column to be used to flag recovery values outside of QC limits
  \* Values outside QC limits
  D System Monitoring Compound diluted out

Analytics Report 64310 page 0026 of 31

PCB SO:L MATRIX SPIKE/DUPLICATE PERCENT RECOVERY

Instrument ID: M

GC €olumn #1: STX-CLPesticides I

Celumi ID 0.25 mm

GC Column #2: STX-CLPesticides II

Spike displicate: LD07159PSOX,,A/C Column ID - 9.25 min

SDG: 64310 Non-spiked sample: 64310-2, A/C

Spike: 64310-2,MS,,A/C Spike duplicate: 64319-2,MSD,,A/C

	1							SPIKE			I	_	
	MS SPIKE	MSD SPIKE	LOWER	LIPPER	RPD	NON-SPIKE	SPIKE	SPIKE		SPIKE DUP	SPIKE DUP		
COMPOUND	ADDED (ug/kg)	ADDED (upky)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC	ŧ	RESULT (up/kg)	%REC	÷	RPD
PCR 1016	201	201	65	140	30	- 6	215	107		202	100	L	6.6
PCB 1260	201	391	60	130	30	0	201	100	L	201	100	L	0.2
PCB 1016 #2	291	201	65	140	30	0	265	132		278	138	L	6.9
BCB D60#1	201	201	60	130	30		261	100		202	401	ı	9.7

3 1016	201	201	65	140	30		215	107	202	100	Ц	6.6	
3 1260	201	201	60	130	30	0	201	100	201	100	Ш	0.2	
3 1016 #2	291	201	65	140	30	0	265	132	278	138		4.9	
\$ 1260 #2	201	201	60	130	30	0	261	100	202	101		9.7	

N	Column	to be	used to	flag rec	overy:	and RPD	values	outside	of QC	iimit

MS/MSD spike solded values have been weight adjusted.

Non-spike result of "0" used in place of "U" to allow calculation of spike recovery.



#### CHAIN OF CUSTODIES

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:COC.doc

Analytics Report 64310 page 0029 of 31

ANALYTICS	SAMPLE	RECEIPT	CHECKL	IST

ANALYT	TICS SAMPLE RECE	EIPT CHECKLIS	ST	
				•
AELLAB#: (4310		COOLER	NUMBER:	
CLIENT: Noo david		NUMBER (	F COOLERS:	
PROJECT: Vale Mason B-ilding		DATER	ECEIVED:	7/15/09
A: PRELIMINARY EXAMINATION:	\	DATE COOLI	ER OPENED:	7/15/07
1. Cooler received by(initials)	-	Date R	teceived:	7/15/09
2. Circle one: Hand deli		Shipped		
3. Did cooler come with a shipping slip?	p3)		Y	N
3a. Enter carrier name and airbill number	ber here:			
Were custody seals on the outside of cooler? How many & where:  Seal Date:		Seal Name:	Y	. <b>À</b>
5. Did the custody seals arrive unbroken and intact upon	arrival?		Y	(N/A) .
6. COC#:				
7. Were Custody papers filled out properly (ink, signed, e	etc)?		(Y)	N ,
8. Were custody papers sealed in a plastic bag?			(X	N
9. Did you sign the COC in the appropriate place?			(Ŷ	N
10. Was the project identifiable from the COC papers?	_		· O	N
11. Was enough ice used to chill the cooler?	(Y'N	Temp. of cooler	٠ .	3.5°C
B. Log-In: Date samples were logged in:	7/1909	Ву:_	77,	
12. Type of packing in cooler(bubble wrap, popcom)			Œ	N
13. Were all bottles sealed in separate plastic bags?			Ø)	N
14. Did all bottles arrive unbroken and were labels in goo	d condition?		Œ)	N
15. Were all bottle labels complete(ID,Date,time,etc.)			$\mathscr{D}$	N
6. Did all bottle labels agree with custody papers?			Œ	N
7. Were the correct containers used for the tests indicates	d:		Œ.	N .
8. Were samples received at the correct pH?			Y	(N/A)
9. Was sufficient amount of sample sent for the tests indicate	cated?		(V)	N
0. Were bubbles absent in VOA samples?			Y	(N/A)
If NO, List sample #s:				
Laboratory labeling verified by (initials):			Date: _	UF 7-15-09

Chain Of Custody Form

_											_	_	_	-		1		 										1
						:Kg	bavi	Book		3	T	L		:4	ned										Ag par	(snou	lasi	
-			2	-//	THE	:69     69	pana	эээу Эээу Эээу	-5	Σ;	тіт 2) этіт		59	1 1 5 2	NEG 7/7			 7	W	77	100 J	4	) ::::	Duns	AB poo	teinpol	198 √ 198	
/ Rev. 5 06/18/08	(-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	tion(v br N	× 1000	ANF 7.15 M	100 / 100	7		Analytics Sample #	64300 -	2-	5-2	ד	7						ants:	ylo	State Standard:		(LWG S-1 or GW-1)	EDD Required: Y* N	Type:		france i of
For Analytics Use Only Rev. 5 06/18/08	Samples were:	1) Shipped of rial grading of	6	Mecked in good curing     Properties	5) Labels checked by:	of powers or second of	Container Key	Peplastic Geglass	Container Natritx rumber/1vine pH	So 1 6-	5 - 3	So 1 6-	5 -	- 35 - 65						Project Requirements:	*Fee may apply	State:		MCP* 1 Level II* MA	Level IV*	Standard L RI Other:		
195 Commerce Way Suite F				oter Vater			0 - Oil E = Extract	Preservation	Mostbanol HV3 HV3 HV3 HV0 HV0 HV0 HV0 HV0 HV0 HV0 HV0 HV0 HV0	7	<i>Z</i> ,	7	_	7								Report Type:	<u> </u>	MCP	000	<u> </u>		
ľ	Portsmouth, NH 03801   Portsmouth, NH 03801	Marie 2		Harre 1			Quote#		Analysis	Pcas	Pc3>	PC3>	PCBS	PCB							SOR2 / SUXHLET	La			DAY TAT			
	7	Proj. Name: XALE		コート・ つまな		01810	- Hod.	bear Trend	Sample Sample Date Time	7,5/00 0840	1/5/24 0045	7/15/As aUSB	1/5/4 0910	7/5/17 1002						Comments / Instructions:	Res 197	E KTRACTION			570 57		par	
		Project#: 213959	Company: Woodard & Curran	Contact: Crease France	Address: 35 New England Business Ctr.		Cone: (866)702-6371	mpler (Signature):	Station Identification	3 418- VS-SS-02	1 HB - VS - SS UC 3	2 MB- YS -55001	5 MB- VS-55065	42- VS- SSECOL	10	003	10	F 3 1			Email Results to: の兄さったいこ	Jhe me	f t	Umaround   Ime (1A)	24hr*	syson of D Days's	"Fee may apply; tab approval required	Analytics14C., Documents14El, CCC

21. Laboratory labeling verified by (initials):





395 Commerce Way Suite & Parlsmauth, New Hampshire 03801 603-436-5111 Fax 603-430-2151 800-929-9906 www.analyticslab.com

August 3, 2009

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Analytical Results Case Narrative Analytics # 64432 Yale Mason Bidg. Proj# 210954

Dear Mr. Franklin:

Enclosed please find the analytical results for samples submitted for the above-mentioned project. The attached Cover Page lists the sample IDs, Lab tracking numbers and collection dates for the samples included in this deliverable.

Samples were analyzed Polychlorinated Biphenyls (PCBs) by EPA Method 8082.

Unless otherwise noted in the Non-conformance Summary listed below, all of the quality control (QC) criteria including initial calibration, calibration verification, surrogate recovery, holding time and method accuracy/precision for these analyses were within acceptable limits.

This Level II data package has been assembled in the following order:

Case Narrative/Non-Conformance Summary Sample Log Sheet - Cover Page CT Certification Page PCB Form 1 Data Sheet for Samples and Blanks Chromatograms PCB Form 10 Confirmation Results PCB Form 3 MS/MSD (LCS) Recoveries Chain of Custody (COC) Forms

AnalyticsLLC:A\_Narratives:WCI:Yale64432.doc

Analytics Report 64432 page 0001 of 16

AnalyticsLLC:A\_Narratives:WCI:Yale64432.doc

Sample Receipt: No exceptions

PCBs by EPA Method 8082: No QC deviations.

Mulmalall for Stephen Knollmeyer

Laboratory Director

Sincerely, ANALYTICS Environmental Laboratory, LLC

Analytics Report 64432 page 0002 of 16

QC NON-CONFORMANCE SUMMARY



195 Commerce Way Suite E Portsmouth, New Hampshire 03801 603-436-5111 Fax 603-430-2151 800-929-9906 www.analyticslab.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

Report Number: 64432 Revision: Rev. 0

Re: Yale Mason Lab

210954

Enclosed are the results of the analyses on your sample(s). Samples were received on 30 July 2009 and analyzed for the tests listed below. Samples were received in acceptable condition, with the exceptions noted below or on the chain of custody. These results pertain to samples as received by the laboratory and for the analytical tests requested on the chain of custody. The results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. Please see individual reports for specific methodologies and references.

Lab Number Sample Date

Station Location

Analysis EPA 8082 (PCBs only) Comments

Sample Receipt Exceptions: None

Analytics Environmental Laboratory is certified by the states of New Hampshire, Maine, Massachusetts, Connecticut, Rhode Island, New York, Virginia, Maryland, and is validated by the U.S. Navy (NFESC). A list of actual certified parameters is available upon request.

If you have any further question on the analytical methods or these results, do not hesitate to call.

Authorized signature

Stephen L. Knollmeyer Lab. Director

Date

October 1. Control 
Date This report shall not be reproduced, except in full, without the written consent of Analytics Environmental Laboratory, LLC.

#### Surrogate Compound Limits

	Matrix: Units:	Aqueous % Recovery	Solid % Recovery	Method
Volatile Organic Compounds - Dri	nking Wa	ter		
1,4-Difluorobenzene		70-130		EPA 524.2
Bromofluorobenzene		70-130		
1,2-Dichlorobenzene-d4		70-130		
Volatile Organic Compounds				
1,2-Dichloroethane-d4		70-120	70-120	EPA 624/8260B
Toluene-d8		85-120	85-120	
Bromofluorobenzene		75-120	75-120	
Semi-Volatile Organic Compounds				
2-Fluorophenol		20-110	35-105	EPA 625/8270C
d5-Phenol		15-110	40-100	
d5-nitrobenzene		40-110	35-100	
2-Fluorobiphenyl		50-110	45-105	
2,4,6-Tribromophenol		40-110	40-125	
d14-p-terphenyl		50-130	30-125	
PAH's by SIM				
d5-nitrobenzene		21-110	35-110	EPA 8270C
2-Fluorobiphenyl		36-121	45-105	
d14-p-terphenyl		33-141	30-125	
Pesticides and PCBs				
2,4,5,6-Tetrachloro-m-xylene (TCX)		46-122	40-130	EPA 608/8082
Decachlorobíphenyl (DCB)		40-135	40-130	
Herbicides				
Dichloroacetic acid (DCAA0		30-150	30-150	
Gasoline Range Organics/TPH Gaso	line			
Trifluorotoluene TFT (FID)		60-140.	60-140	MEDEP 4217/EPA 8015
Bromofluorobenzene (BFB) (FID)		60-140	60-140	-
Trifluorotoluene TFT (PID)		60-140	60-140	
Bromofluorobenzene (BFB) (PID)		60-140	60-140	
Diesel Range Organics/TPH Diesel				
m-terphenyl		60-140	60-140	MEDEP 4125/EPA 8015/CT ETPH

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Analytics LLC/2003-2007 Narratives/ SystemMonitoringComp\_REV1.xls

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:PCB.doc

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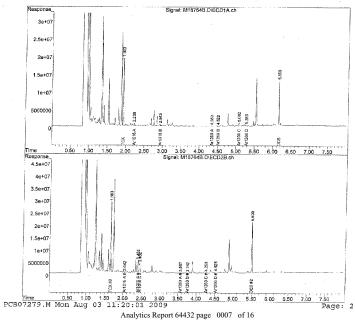
Data Path: C:\msdchem\1\DATA\080309-M\
Data File: M18764B.D
Signal(s): Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 3 Aug 2009 10:14 am

| Signat #1 | Suprat #1 | Supr

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 03 11:20:01 2009
Quant Method: C:\msdchem\l\method\text{Nmothod}\te

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



analytics / miscanutel

595 Commerce Way Portsmouth, New Hompshire 0350 603-436-5111 Fox 603-430-2151 cm.pop.com

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Lab

Project Number: 210954 Field Sample ID: Lab OC

SAMPLE DATA B07309PSOX Lab Sample ID:

Matrix: Percent Solid: N/A 1.0

Dilution Factor: Collection Date: Lab Receipt Date:

07/30/09 Extraction Date: Analysis Date: 08/03/09

PCB ANALYTICAL RESULTS							
COMPOUND	Quantitation Limit µg/kg	Results µg/kg					
PCB-1016	33	U					
PCB-1221	33	U					
PCB-1232	33	U					
PCB-1242	33	U					
PCB-1248	33	IJ					
PCB-1254	33	U					
PCB-1260	33	U					

Surrogate Standard Recovery

2.4.5.6-Tetrachloro-m-xylene 81 %

Decachlorobiphenyl

84

U=Undotected J=Estimated E=Exceeds Calibration Range B=Detected in

METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082.

Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C. COMMENTS: Results are expressed on a dry weight basis

Authorized signature Multible

Analytics Report 64432 page 0006 of 16

analytics / bases the

195 Commerce Way Portamoutt, New Hompshire 0580 503-436-5111 Fax 603-430-2161

Mr. George Franklin Woodard & Curran 35 NE Business Center Suite 180 Andover MA 01810

CLIENT SAMPLE ID Project Name: Yale Mason Lab

Project Number: 210954 Field Sample ID: YMB-VS-CC101 August 3, 2009

SAMPLE DATA 64432-1

Lab Sample ID: Matrix: Solid Percent Solid: Dilution Factor: 1.0 Collection Date: 07/30/09

Lab Receipt Date: 07/30/09 Extraction Date: 07/30/09 Analysis Date: 08/03/09

	PCB ANALYTICAL RESULTS						
COMPOUND	Quantitation Limit µg/kg	Results µg/kg					
PCB-1016	33	U					
PCB-1221	33	U					
PCB-1232	33	U					
PCB-1242	33	U					
PCB-1248	33	tī					
PCB-1254	33	555					
PCB-1260	33	ŭ					
	Surrogate Standard Recovery						
	2,4,5,6-Tetrachioro-m-xylene 80 %						
	Decachlorohiphenyi 88 %						

U=Undetected J=Estimated E=Exceeds Calibration Range B=Detected in METHODOLOGY: Sample analysis conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 8082 Sample preparation conducted according to Test Methods for Evaluating Solid Waste, SW-846 Method 3540C.

Results are expressed on a dry weight basis.

COMMENTS:

Authorized signature \_\_Mlhll

### PCB COLUMN RELATIVE PERCENT DIFFERENCE

Instrument ID: M

SDG: 64432

GC Column #1: STX-CLPesticides I

Sample: 64432-1, A/C

Column JD: 0,25 mm

Data File: M18767,D

GC Column #2; STX-CLPesticides II

Dilution Factor: 1.0

Column ID: 0,25 mm

Column #1 Column #2

COMPOUND	SAMPLE RESULT (ug/kg)	SAMPLE RESULT (ug/kg)	RPD	#
PCB 1254	555	537	3.3	

# Column to be used to flag RPD values greater than QC limit of 40%

\* Values outside QC limits

PCB FORM 10

Analytics Report 64432 page 0009 of 16

analytics -

PCB QC FORMS

AnalyticsLLC:AEL 1 LLC:Pkg Dividers:PCBQC.doc

Analytics Report 64432 page 0011 of 16

Quantitation Report (Not Reviewed)

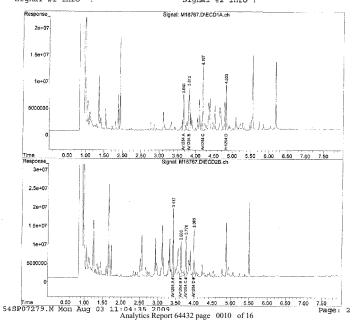
Data Path : C:\msdchem\1\DATA\080309-M\
Data File : M18767.D
Signal(s) : Signal #1: ECD1A.ch Signal #2: ECD2B.ch
Acq On : 3 Aug 2009 10:54 am
Operator :
Sample : 64432-1,,A/C
Misc : SOIL

Operator : Sample : 64432-1,,A/C Misc : SOIL ALS Vial : 6 Sample Multiplier: 1

Integration File signal 1: events.e
Integration File signal 2: events2.e
Quant Time: Aug 03 11:04:29 2009
Quant Method: C:\msdchem\1\METHODS\54SP07279.M
Quant Title: :
QLast Update: Tue Jul 28 10:52:16 2009
Response via: Initial Calibration
Integrator: ChemStation

Volume Inj. : Signal #1 Phase : Signal #1 Info :

Signal #2 Phase: Signal #2 Info :



# PCB SOIL SYSTEM MONITORING COMPOUNDS SUMMARY

Instrument ID: M
GC Column #1: STX-CLPesticides I
Column ID: 0.25 mm
GC Column #2: STX-CLPesticides II
Column ID: 0.25 mm

SDG: 64432

) #	SMC 2 (%) 84 84 84 84 88	#	SMC 1 (%) 94 97 92 90	#	SMC 2 (%) 93 94 97 94	#
	84 84 88		97 92 90		93 94 97	
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Upper Limit 130 130 Lower Limit SMC #1 = TCX SMC #2 = DCB

# Column to be used to flag recovery values outside of QC limits
\* Values outside QC limits
D System Monitoring Compound diluted out

PCB FORM 2 Analytics Report 64432 page 0012 of 16

#### PCS SOIL LABORATORY CONTROL SAMPLE/DUPLICATE PERCENT RECOVERY

Instrument ID: M

GC Column #1: STX-CLPesticides I

Column ID: 0.25 mm

GC Column #2: STX-CLPesticides II

Column ID: 0.25 mm

SDG: 64432Non-spiked sample: B07309PSOX,,,A/C
Spike: F.07309PSOX,,A/C
Spike: duplicate: LD07309PSOX,,A/C

	LUS SPIKE	LCSD SPIKE	LOWER	UPPER	R/D	NON-SPIKE	SPIKE	SPEKE		SPIKE DUP	SPIKE DUP			
COMPOUND	ADDED (ug/kg)	ADDED (ug/kg)	LIMIT	LIMIT	LIMIT	RESULT (ug/kg)	RESULT (ug/kg)	% REC	ø	RESULT (ug/kg)	%-REC	ù	RPO	÷
PCB 1016	200	200	65	140	30	0	182	91		177	89		2.7	Γ
PCB 1260	200	200	60	130	30	. 0	182	91		189	94		2.9	Г
PCB 1016 #2	200	200	65	140	30	0	279	140		275	138		1.4	Γ
PCB 1260 #2	200	260	60	130	30	0	209	104		214	107		2.6	

# Column to be used to flue recovery and RPO values outside of QC limits

Values outside QC limits

LCS/LCSD spike added values have been weight adjusted.

Non-spike result of "0" used in place of "Cf" to allow calculation of spike recovery.

-

PCB FORM 3

Analytics Report 64432 page 0013 of 16

analytics - manual

AnalyticsLLC:AEL Documents LLC:Pkg Dividers:COC.doc

Analytics Report 64432 page 0014 of 16

CHAIN OF CUSTODIES

:emit telaC os(t Analytics Sample # 6 4432 -1 (eg. S-1 or GW-1) EDD Required: Type: H State:

N M M M

O The C G=g/a3 MCP Level 8" EDDD Level 10" EDDD Level 10" EDDD EDDD EDDD EDDDD ED Chain Of Custody Form 195 Commorce Way Suite E Portsmouth, NH 03801 Fhore (603) 436-5111 Fax (603) 430-2151 Analysis environmental nents / Instructions: vrlaci: Mr. George Franklin Idress: 35 New England Business Center Suite 180 Andover: MA 01810 Proj. Name: Yale Mason Lab Sample Date 7130 ne: (978)557-8150 PO# npler (Signature): oject#: 210954 Pro ompany Wooderd &Curran Email Results to: g Franklin (2) wooderd (urran.com 48hr 5 Days' 10 Days Tumaround Time (TAT Station Identification 1MB- VS- CC101

ANALYTICS	SAMPLE	RECEIPT	CHECKLIST

<b>analytics</b> √ <b>exercit</b>			
ABILIAB#: <u>6443</u> 2 CLIENT: <u>W+C Andrel</u> PROJECT: Yak Mason Lab	NUMBER	R NUMBER: OF COOLERS: RECEIVED:	1 7/30/01
A: PRELIMINARY EXAMINATION:	DATE COOL	ER OPENED:	7/30/09
1. Cooles received by(initials)	Date 1	Received:	NF 7/30/0
2. Circle one:  Hand delivered (it so, skip 3)	Shipped		
3. Did cooler come with a shipping slip?		Y	N
3a. Enter carrier name and airbill number here:			<u> </u>
Were custody seals on the outside of cooler?     How many & where:    Seal Date:	_Seal Name:	. <b>Y</b>	- (*)/4)
5. Did the custody seals arrive unbroken and intact upon arrival?		Y	( <b>y</b> /
6. COC#:			
7. Were Custody papers filled out properly (ink,signed, etc)?		$\odot$	N
8. Were custody papers sealed in a plastic bag?		୍ତି ଡ ୧	N
<ol><li>Did you sign the COC in the appropriate place?</li></ol>		$\odot$	N
10. Was the project identifiable from the COC papers?		➂	N
11. Was enough ice used to chill the cooler?	Temp. of cooler	r:	2.5°C
B. Log-In: Date samples were logged in: \frac{\frac{7}{30}00}{2}	Ву:_	NF	
12. Type of packing in cooler bubble wrap, popcorn)		O	N
13. Were all bottles scaled in separate plastic bags?		, Y	ூ
14. Did all bottles arrive unbroken and were labels in good condition?		$\langle \hat{\mathbf{v}} \rangle$	N
15. Were all bottle labels complete(ID Date,time,etc.)		Ř	·N
16. Did all bottle labels agree with custody papers?		୍ <b>ବ</b> ବ୍ର	N
17. Were the correct containers used for the tests indicated:		(P)	N -
18. Were samples received at the correct pH?		Y	(N/A)
19. Was sufficient amount of sample sent for the tests indicated?		(Y)	N
20. Were bubbles absent in VOA samples?	,	Ÿ	(NA)
If NO, List sample #'s:			<i></i>
21. Laboratory labeling verified by (initials):		Date:	P+/30/09

canlytics electabl documents/forms/smfl christness 4908  $$\operatorname{Analytics}$$  Report 64432 page  $\;0016\;$  of  $16\;$ 

Rev. 1, 4/9/08



# **APPENDIX D: DATA VALIDATION SUMMARIES**

#### YALE MASON BUILDING VERIFICATION SAMPLING - PROJECT SUMMARY

Analytics Environmental Laboratory Job Numbers: 63965, 64062, 64132, 64310, and 64432

A modified Tier II validation was performed on the data. The criteria detailed below were used to qualify the data. Raw data were not used to verify the results reported by the laboratory.

Samples were received at 1.1, 2.0, 2.5, 2.6, and 3.5 degrees Celsius. Although some of the samples were received at less than 2 degrees Celsius, they were not frozen and no qualifications will be applied.

#### PCBs:

All polychlorinated biphenyl compound (PCB) samples were extracted and analyzed within technical holding times. No qualifications will be applied.

All PCB surrogates met acceptance criteria or were diluted out. No qualifications will be applied.

The PCB method blanks were non-detect (ND) for all target analytes. No qualifications will be applied.

PCB field blank samples EB-01 (63965-27) and EB-01 (64062-9) were ND for all target analytes. No qualifications will be applied.

PCB matrix spike/matrix spike duplicate (MS/MSD) performed on samples YMB-CS-CC01 (63965-1), YMB-VS-SS001 (64132-3), and YMB-VS-SS004 (64310-3) met acceptance criteria (PCB-1016/65%-140%, PCB-1260/60%-130%) with the following exceptions:

LAB ID	SAMPLE ID	PCB-1016 (%)	PCB-1260 (%)	QUALIFIER
		MS/MS/MSD/MSD	MS/MS/MSD/MSD	
63965-1	YMB-CS-CC01	318/249/OK/OK	412/329/218/184	None, 10X DL therefore DO
64132-3	YMB-VS-SS001	309/170/OK/OK	608/330/526/294	None, 5x DL and PCB- 1254 interference

DL=dilution; DO=diluted out

The PCB laboratory control samples (LCS) and/or laboratory control sample duplicates (LCSD) met acceptance criteria. No qualifications will be applied.

PCB field duplicate samples YMB-CS-CC19 (63965-19)/YMB-CS-CC99 (63965-20) and YMB-CS-CC01C (64062-6)/YMB-CS-CC99 (64062-7) met acceptance criteria (≤50%) with the following exception. The relative percent difference (RPD) between the results for PCB-1254 in field duplicate samples YMB-CS-CC19 (63965-19)/YMB-CS-CC99 (63965-20) (110%) exceeded acceptance criteria. The PCB-1254 results will be estimated (J) in samples YMB-CS-CC19 (63965-19) and YMB-CS-CC99 (63965-20) due to high field duplicate RPD.

The RPD between the column results for all detected PCBs met acceptance criteria (≤25%) with the following exceptions:

LAB ID	SAMPLE ID	PCB	RPD	QUALIFIER
64062-6	YMB-CS-CC01C	1254	30.4	J
64062-7	YMB-CS-CC99	1254	28.5	J

Several samples were analyzed at a dilution due to the high concentration of PCB-1254 present in the samples. Elevated quantitation limits are reported in these samples as a result of the dilutions performed.

The lower concentration of PCB-1254 was reported for sample YMB-VS-SS005 (64310-4) since the primary column had interferences.

## YALE MASON BUILDING VERIFICATION SAMPLING - PROJECT SUMMARY

Analytics Environmental Laboratory Job Numbers: 63965, 64062, 64132, 64310, and 64432

Data Check, Inc. P.O. Box 29 81 Meaderboro Road New Durham, NH 03855

Gloria J. Switalski: President

Date:

08/05/09



# APPENDIX E: WASTE MANIFESTS AND CERTIFICATES OF DISPOSAL

1		NIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number CTROCOCO	3236	2. Page 1 of 3	3. Emergency Response (203)238-6	Phone 745	00	013	332	2 U	IS
		Generator's Name and Maili	ng Address	2	<del>    G</del>	enerator's Site Address	(if different th	an mailing addre	ss)			
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	7.	Fransporter 2 Company Nam	ne					U.S. EPA ID I	Number			
			7.5					U.S. EPAID	Number			
	8.1		nd Site Address ical Services,	LLC					004983	6 67 O		
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	Fac		7548231									
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#### **CWM CHEMICAL SERVICES, LLC**

1550 Balmer Road P.O. Box 200 Model City, NY 14107 (716) 754-8231 (716) 754-0211 Fax

YALE UNIVERSITY ATTN: JOANN FARRELL, ENVIRONMENTAL SVCS. SECTION CTR000003236 P.O. BOX 208112 NEW HAVEN CT 06520-8112

## CERTIFICATE OF DISPOSAL

CWM CHEMICAL SERVICES, L.L.C., EPA ID: NYD049836679, has received waste material from YALE UNIVERSITY on 06/19/09 as described on Shipping Document number 000133322UIS Sequence number 01. CWM CHEMICAL SERVICES, L.L.C. hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.

Profile Number: NY298986 CWM Tracking ID: 8163515601

CWM Unit #: 1\*0

Disposal Date: 06/19/09

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true accurate and complete.

MICHAEL D MAHAR DISTRICT MANAGER

Certificate # 331543

06/22/09

For questions please call our Customer Service Dept. at (800) 843-3604

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#### **CWM CHEMICAL SERVICES, LLC**

1550 Balmer Road P.O. Box 200 Model City, NY 14107 (716) 754-8231 (716) 754-0211 Fax

YALE UNIVERSITY ATTN: JOANN FARRELL, ENVIRONMENTAL SVCS. SECTION CTR000003236 P.O. BOX 208112 NEW HAVEN CT 06520-8112

#### CERTIFICATE OF DISPOSAL

CWM CHEMICAL SERVICES, L.L.C., EPA ID: NYD049836679, has received waste material from YALE UNIVERSITY on 08/04/09 as described on Shipping Document number 000146209UIS Sequence number 01. CWM CHEMICAL SERVICES, L.L.C. hereby certifies that the above described material was landfilled in accordance with the 40 CFR part 761 as it pertains to the land disposal of polychlorinated biphenyl contaminated materials.

Profile Number: NY298986 CWM Tracking ID: 8163589701 CWM Unit #: 1\*0

Disposal Date: 08/04/09

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verifyication that this information is true accurate and complete.

MICHAEL D MAHAR DISTRICT MANAGER Certificate # 332524 08/05/09

For questions please call our Customer Service Dept. at (800) 843-3604

# LDR NOTIFICATION OR CERTIFICATION FORM For New York Regulated PCB Waste

This form is required for wastes containing 50 ppm PCB or greater. The profiled waste on the manifest number indicated below is listed hazardous waste ("B-coded") in NY. Note: 50-500 ppm PCB drained articles and small capacitors (as defined in 40CFR761.3) are not regulated by NY State. Please complete items 1.- 8. and send with the first shipment of waste/profile.

1.) Generator Name VALE UNIVERSTY									
	2.) Manifest Number OOOM629 U15 3.) CWM Profile# NY2986								
4.) Pleas	se check all boxes that apply.	act of Service 7/5/09							
NY Waste Code	Identity/Type of PCB Waste								
B001	☐ Concentrated PCB Oil								
B002	☐ Oil/liquid 50-499 ppm PCBs								
B003									
B004	Manufactured PCB Articles 50-499 ppm:	☐ transformers ☐ motors ☐ switches ☐ cable ☐ pumps ☐ pipe ☐ large capacitors ☐ bushings ☐ other (specify):							
B005	Manufactured PCB Articles (other than transformers) 500 ppm or greater:	☐ motors ☐ switches ☐ cable ☐ pumps ☐ pipe ☐ large capacitors ☐ bushings ☐ other (specify):							
B006	B006 PCB Transformers 500 ppm or greater								
B007	B007 Other PCB Wastes:    soil   sludge   clothing   rags   wood     other (specify): Concept								
CERTIF	meets all applicable treatment standards set forth in 6 N Waste does not include solidified B002 material (liquical licentify under penalty of law that I personally have exathrough knowledge of the waste to support this certificant NYCRR Part 376, section 376.4. and all applicable pro	t is restricted under 6 NYCRR Part 376. I have determined that this waste NYCRR 376 and, therefore, it can be landfilled without further treatment. I with PCBs 50-500ppm).  The samined and am familiar with the waste through analysis and testing or ation that the waste complies with the treatment standards specified in 6 hibitions set for in 376.3(b) of part 376 or RCRA section 3004(d). I believe complete. I am aware that there are significant penalties for submitting a false							
	am familiar with the waste through analysis and testing	R Part 376 as identified above. I notify that I personally have examined and g or through knowledge of the waste to support this notification that the							
6.) Sign	applicable standards set forth in 6 NYCRR 376 4 (f) pr	pecified in 6 NYCRR Part 376.4 (f). This waste must be treated to the riot to land disposal.  ASD 8.) Date							

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$\Gamma$		INIFORM HAZARDOUS 1. Generator ID Number   2. Pag	e 1 of 3. Emergency			HOI	m Approved, OME	PN6:2050-0039		
11	١١٠	WASTE MANIFEST CTR000003236		Tracking N	lumber					
	ہا		- 1 00	128	77181	FIF				
	13.	Generator's Site Address (if different than malling address)								
		Yele University Vole I Iniversity 250 Educate Street								
		Env Affairs Section P.O. Box 208112								
П	٦	New Haven, CT 06520-8112 New Haven CT 06520								
11	6	6. Transporter I Company Name								
11	1	U.S. EPA I) Nilmber								
Ιİ	ļ_		Triumvirate Environmental, Inc.							
11	1.	Transporter 2 Company Name	U.S. EPAID N		5 2 8 6 9					
11			1							
П	8.	8. Designated Facility Name and Site Address								
П	1	Pollution Control Industries								
Ш		4343 Kennedy Avenue								
H		East Chicago, IN 46312								
П	Fa	cility's Phone: (800) 388-7242			IIND	0 0	0 6 4 6 9	4 3		
П	9a		11	). Containers		11, Total 12, Unit				
Ш	HA	and Packing Group (if any))	N	0. Tv	pe Quantity	Wt./Vol.	13. Waste	Codes		
۱,		Non-regulated material (poly sheeting)		····	,ps  y	1111102	<del></del>	<del></del> -		
ĮΘ		Morare Briggier Historian (hork streemus)					CR05			
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	14	Special Handling Instructions and Additional Information						1 1		
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1	1	- (2 x 55 ) TEI16912 2- 3- 4-						ŀ		
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	A41,2718									
1	15. GENERATOR'S OFFEROR'S CERTIFICATION: Thereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged,									
1	marked and labeled/placarded, and are in all respects in proper contents of the contents of th									
	Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.  Learlify that the waste minimization statement identified in 40 CFR 282.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
	Gen	erator's Priferor's Printed Typed Name	generator) or (b) (f) a	n a small quant	ity generalor) is true.			ľ		
		6/3 1 1/1	Signature	-P 3/1	1		Month	Day Year		
*	40.1	KOBENT PULG- 9UPS	Wale.	1 ///	1		1091	2109		
E	10. i	international Shipments I Import to U.S. Export f		ort of entry/exit:	-					
≅.	Trar	reporter signature (for exports only):								
នា	17.1	Transporter Acknowledgment of Receipt of Materials	<u> </u>	ile leaving U.S.:						
SPORTER		sporter 1 Drinted/Typed Name?	Signature				N1-	Day 17		
읽		Lein Coulon		. ~ /				Day Year		
	Tran	Sporter 2 Printed/Typed Name	7				09 0	11 69		
ŞI		· ··· · · · · · · · · · · · · · · · ·	Signature				Month	Day Year		
=1										
1 1		Discrepancy		***************************************						
П	188.	Discrepancy Indication Space Quantity Type	□ _ ·	······································			- Ferri			
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≥ľ	18b. /	Alternate Facility (or Generator)	Manifest Re	ference Numbe						
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₹	rn-	4.1. OL			,					
	Feoility Phone:									
<b>#</b>		Signature of Alternate Facility (or Generator)					Month	Day Year		
≹L								1 1		
ž L	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
3	3 3.   4.									
ıl		N4			13.			l		
H	20. Designated Facility Owner or Operator; Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
f	inte	of Typed Name		ım item 18a						
	V	12 CCV KITTON LAW ON.	Sign lure	1-A-A-1	Ti ()		/Ng/h) ]	2 X2 X2 X		
- L	A Form 8700.22 (Pay \$105) Browning diseases a dealy									
4	UIII	Trevious editions are obsolete.		FSIGNATE	D FACILITY TO DE	TAMITE	ION STATE HE	DECINOED)		

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